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OF

PROCEEDINGS AND ADDRESSES

OF THE

THIRTY-SEVENTH ANNUAL MEETING

HELD AT

WASHINGTON, D. C., JULY 7-12, 1898

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CONSTITUTION

OF THE

NATIONAL EDUCATIONAL ASSOCIATION

PREAMBLE

To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States, we, whose names are subjoined, agree to adopt the following

CONSTITUTION

ARTICLE I — NAME

This association shall be styled the NATIONAL EDUCATIONAL ASSOCIATION.

ARTICLE II — DEPARTMENTS

Section 1. It shall consist of seventeen departments: First, of Superintendence; second, of Normal Schools; third, of Elementary Education; fourth, of Higher Education; fifth, of Industrial Education; sixth, of Art Education; seventh, of Kindergarten Education; eighth, of Music Education; ninth, of Secondary Education; tenth, of Business Education; eleventh, of Child-Study; twelfth, of Physical Education; thirteenth, of Natural Science Instruction; fourteenth, of School Administration; fifteenth, the Library Department; sixteenth, for the Education of the Deaf, Blind, and Feeble-minded; and seventeenth, the National Council of Education.

Sec. 2. Other departments may be organized in the manner prescribed in this constitution.

ARTICLE III — MEMBERSHIP

Section 1. There shall be three classes of members, namely, active, associate, and corresponding.

Sec. 2. Teachers and all who are actively associated with the management of educational institutions, including libraries and periodicals, may become active members. All others who pay an annual membership fee of two dollars may become associate members. Eminent educators not residing in America may be elected by the Directory to be corresponding members. The number of corresponding members shall at no time exceed fifty.

Sec. 3. Any person eligible may become an active member upon application indorsed by two active members, and the payment of an enrollment fee of two dollars and the annual dues for the current year.

All active members must pay annual dues of two dollars, and will be entitled to the volume of proceedings without "coupon" or other conditions. If the annual dues are not paid within the fiscal year, membership will lapse, and may be restored only on payment of the enrollment fee of two dollars and the annual dues for the current year. All life members and life directors shall be denominated active members, and shall enjoy all the powers and privileges of such members without the payment of annual dues.

Associate members may receive the volume of proceedings in accordance with the usual "coupon" conditions, as printed on the membership certificate.

Corresponding members will be entitled to the volume of proceedings without the payment of fees or other conditions.

Sec. 4. The names of active and corresponding members only will be printed in the volume of proceedings, with their respective educational titles, offices, and addresses, the list to be revised annually by the Secretary of the association.

ARTICLE IV—OFFICERS

Section 1. The officers of this association shall consist of a President, twelve Vice-Presidents, a Secretary, a Treasurer, a Board of Directors, a Board of Trustees, and an Executive Committee, as hereinafter provided.

Sec. 2. The Board of Directors shall consist of the President of the National Educational Association, First Vice-President, Secretary, Treasurer, chairman of the Board of Trustees, and one additional member from each state, territory, or district, to be elected by the association for the term of one year, or until their successors are chosen, and of all life directors.

All past presidents of the association now living (July 10, 1895), and all future presidents at the close of their respective terms of office, and the United States Commissioner of Education shall be life directors of the association. The President of the National Educational Association, First Vice-President, Treasurer, chairman of the Board of Trustees, and a member of the association to be chosen annually by the Board of Directors, which member shall hold office for one year, shall constitute the Executive Committee.

Sec. 3. The elective officers of the association, with the exception of the Secretary, shall be chosen by the active members of the association by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary for a choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

Sec. 4. Each department shall be administered by a president, vice-president, secretary, and such other officers as it shall deem necessary to conduct its affairs; but no person *shall be elected to any office of the association, or of any department, who is not, at the time of the election, an active member of the association.*

Sec. 5. The President shall preside at all meetings of the association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, the first vice-president in order, who is present, shall preside; and in the absence of all vice-presidents a *pro-tempore* chairman shall be appointed on nomination, the Secretary putting the question.

Sec. 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the association and all meetings of the Board of Directors, and shall conduct such correspondence as the directors may assign, and shall have his records present at all meetings of the association and of the Board of Directors. The secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

Sec. 7. The Treasurer shall receive, and under the direction of the Board of Trustees hold in safe-keeping, all moneys paid to the association; shall expend the same only upon the order of said board; shall keep an exact account of his receipts and expenditures, with vouchers for the latter, which accounts, ending the 1st day of July each year, he shall render to the Board of Trustees, and, when approved by said board, he shall report the same to the Board of Directors. The Treasurer shall give such bond for the faithful discharge of his duties as may be required by the Board of Trustees; and he shall continue in office until the first meeting of the Board of Directors held prior to the annual meeting of the association next succeeding that for which he is elected.

Sec. 8. The Board of Directors shall have power to fill all vacancies in their own body; shall have in charge the general interests of the association, excepting those herein intrusted to the Board of Trustees; shall make all necessary arrangements for its meetings, and shall do all in its power to make it a useful and honorable institution. Upon the written application of twenty active members of the association for permission to establish a new department, it may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the others. The formation of such department shall in effect be a sufficient amendment to this constitution for the insertion of its name in Art. II, and the Secretary shall make the necessary alterations.

Sec. 9. The Board of Trustees shall consist of four members, elected by the Board of Directors for the term of four years, and the President of the association, who shall be a member *ex officio* during his term of office. At the election of the trustees in 1886, one trustee shall be elected for one year, one for two years, one for three years, and one for four years; and annually thereafter, at the first meeting of the Board of Directors held prior to the annual meeting of the association, one trustee shall be elected for the term of four years. All vacancies occurring in said Board of Trustees, whether by resignation or otherwise, shall be filled by the Board of Directors for the unexpired term; and the absence of a trustee from two successive annual meetings of the board shall forfeit his membership therein. The Board of Trustees thus elected shall constitute the body corporate of the association, as provided in the certificate of incorporation under the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, dated the 24th day of February, 1886, at Washington, D. C., and recorded in Liber No. 4, "Acts of Incorporation for the District of Columbia."

Sec. 10. It shall be the duty of the Board of Trustees to provide for safe-keeping and investment of all funds which the association may receive from donations; and the ncome of such invested funds shall be used exclusively in paying the cost of publishing the annual volume of proceedings of the association, excepting when donors shall specify otherwise. It shall also be the duty of the board to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the association acting under the authority of the Board of Directors; and, when practicable, the trustees shall invest all surplus funds exceeding one hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the association for the previous year.

Sec. 11. The Board of Trustees shall elect the Secretary of the association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of office for a period not to exceed four years.

ARTICLE V—MEETINGS

Section 1. The annual meeting of the association shall be held at such time and place as shall be determined by the Board of Directors.

Sec. 2. Special meetings may be called by the President at the request of five directors.

Sec. 3. Any department of the association may hold a special meeting at such time and place as by its own regulations it shall appoint.

Sec. 4. The Board of Directors shall hold its regular meetings at the place and not less than two hours before the assembling of the association.

Sec. 5. Special meetings may be held at such other times and places as the board or the President shall determine.

Sec. 6. Each new board shall organize at the session of its election. At its first meeting a committee on publication shall be appointed, which shall consist of the President and the Secretary of the association for the previous year, and one member from each department.

ARTICLE VI—BY-LAWS

By-laws not inconsistent with this constitution may be adopted by a two-thirds vote of the association.

ARTICLE VII—AMENDMENTS

This constitution may be altered or amended at a regular meeting by the unanimous vote of the members present; or by a two-thirds vote of the members present, provided that the alteration or amendment has been substantially proposed in writing at a previous meeting.

BY-LAWS

1. At the first session of each annual meeting of the association there shall be appointed by the President a committee on resolutions; and at the third session of such meeting there shall be appointed a committee on nominations, consisting of one member from each state represented, the same to be appointed by the President on the nomination of a majority of the active members in attendance from such state; provided, however, that such appointment shall be made by the President without such nomination, when less than three active members from a state are in attendance, and also when a majority of the active members in attendance from any one state shall fail to make a nomination. The meeting of active members to nominate members of the nominating committee shall be held at 2 P. M. on the second day of the meeting, at such place as shall be announced in the general program.

2. The President and Secretary shall certify to the Board of Trustees all bills approved by the Board of Directors.

3. Each paying member of the association shall be entitled to a copy of its proceedings.

4. No paper, lecture, or address shall be read before the association or any of its departments in the absence of its author, nor shall any such paper, lecture, or address be published in the volume of proceedings, without the consent of the association, upon approval of the Executive Committee.

5. It shall be the duty of the President, Secretary, and Treasurer of the association to appoint annually some competent person to examine the securities of the Permanent Fund held by the Board of Trustees, and his certificate, showing the condition of the said fund, shall be attached to the report of the Board of Trustees.

ADOPTED BY THE BOARD OF DIRECTORS

The establishment of a special fund from surplus receipts, after the expenses of the association have been paid, to be known as the "Emergency Fund," was recommended by the Board of Trustees, submitted to the Board of Directors at Saratoga Springs, N. Y., July 12, 1892, and the following resolution was adopted:

Resolved, That there be established, as soon as the current expenses of the association will warrant, an Emergency Fund not to exceed $4,000. Said fund shall be subject to expenditure by the Board of Trustees in accordance with votes of the Board of Directors at any regularly called meeting. The said fund may be used for the purpose of meeting deficiencies of income of the association, and for such additional investigations and publications as may be determined by said Board of Directors.

ACT OF INCORPORATION

At a meeting of the Board of Directors of the National Educational Association, held at Saratoga Springs, N. Y., July 14, 1885, the following resolution was passed:

Resolved, That a committee of three be appointed to secure articles of incorporation for the National Educational Association, under United States or state laws, as speedily as may be.

N. A. Calkins, of New York; Thomas W. Bicknell, of Massachusetts, and Eli T. Tappan, of Ohio, were appointed such committee.

Under the authority of the resolution quoted above, and with the approval of the committee, and by competent legal advice, the chairman obtained a

CERTIFICATE OF INCORPORATION

We, the undersigned, Norman A. Calkins, John Eaton, and Zalmon Richards, citizens of the United States, and two of them citizens of the District of Columbia, do hereby associate ourselves together, pursuant to the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, under the name of the "National Educational Association," for the full period of twenty years, the purpose and objects of which are to elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States. . . . . To secure the full benefit of said act, we do here execute this our certificate of incorporation as said act provides.

In witness whereof, we severally set our hands and seals this 24th day of February, 1886, at Washington, D. C.

NORMAN A. CALKINS. [L. S.]
JOHN EATON. [L. S.]
ZALMON RICHARDS. [L. S.]

Duly acknowledged before Michael P. Callan, notary public in and for the District of Columbia, and recorded in Liber No. 4, Acts of Incorporation for the District of Columbia.

CALENDAR OF MEETINGS

NATIONAL TEACHERS' ASSOCIATION

1857.—PHILADELPHIA, PA. (Organized.)
JAMES L. ENOS, Chairman.
W. E. SHELDON, Secretary.

1858.—CINCINNATI, O.
Z. RICHARDS, President.
J. W. BULKLEY, Secretary.
A. J. RICKOFF, Treasurer.

1859.—WASHINGTON, D. C.
A. J. RICKOFF, President.
J. W. BULKLEY, Secretary.
C. S. PENNELL, Treasurer.

1860.—BUFFALO, N. Y.
J. W. BULKLEY, President.
Z. RICHARDS, Secretary.
O. C. WIGHT, Treasurer.

1861, 1862.—No session.

1863.—CHICAGO, ILL.
JOHN D. PHILBRICK, President.
JAMES CRUIKSHANK, Secretary.
O. C. WIGHT, Treasurer.

1864.—OGDENSBURG, N. Y.
W. H. WELLS, President.
DAVID N. CAMP, Secretary.
Z. RICHARDS, Treasurer.

1865.—HARRISBURG, PA.
S. S. GREENE, President.
W. E. SHELDON, Secretary.
Z. RICHARDS, Treasurer.

1866.—INDIANAPOLIS, IND.
J. P. WICKERSHAM, President.
S. H. WHITE, Secretary.
S. P. BATES, Treasurer.

1867.—No session.

1868.—NASHVILLE, TENN.
J. M. GREGORY, President.
L. VAN BOKKELEN, Secretary.
JAMES CRUIKSHANK, Treasurer.

1869.—TRENTON, N. J.
L. VAN BOKKELEN, President.
W. E. CROSBY, Secretary.
A. L. BARBER, Treasurer,

1870.—CLEVELAND, O.
DANIEL B. HAGER, President.
A. P. MARBLE, Secretary.
W. E. CROSBY, Treasurer.

NAME CHANGED TO

NATIONAL EDUCATIONAL ASSOCIATION

1871.—ST. LOUIS, MO.
J. L. PICKARD, President.
W. E. CROSBY, Secretary.
JOHN HANCOCK, Treasurer.

1872.—BOSTON, MASS.
E. E. WHITE, President.
S. H. WHITE, Secretary.
JOHN HANCOCK, Treasurer.

1873.—ELMIRA, N. Y.
B. G. NORTHROP, President.
S. H. WHITE, Secretary.
JOHN HANCOCK, Treasurer.

1874.—DETROIT, MICH.
S. H. WHITE, President.
A. P. MARBLE, Secretary.
JOHN HANCOCK, Treasurer.

1875.—MINNEAPOLIS, MINN.
W. T. HARRIS, President.
W. R. ABBOTT, Secretary.
A. P. MARBLE, Treasurer.

1876.—BALTIMORE, MD.
W. F. PHELPS, President.
W. D. HENKLE, Secretary.
A. P. MARBLE, Treasurer.

1877.—LOUISVILLE, KY.
M. A. NEWELL, President.
W. D. HENKLE, Secretary.
J. ORMOND WILSON, Treasurer.

1878.—No session.

1879.—PHILADELPHIA, PA.
JOHN HANCOCK, President
W. D. HENKLE, Secretary.
J. ORMOND WILSON, Treasurer.

1880.—CHAUTAUQUA, N. Y.
J. ORMOND WILSON, President.
W. D. HENKLE, Secretary.
E. T. TAPPAN, Treasurer.

1881.—ATLANTA, GA.
James H. Smart, President.
W. D. Henkle, Secretary.
E. T. Tappan, Treasurer.

1882.—SARATOGA SPRINGS, N. Y.
G. J. Orr, President.
W. E. Sheldon, Secretary.
H. S. Tarbell, Treasurer.

1883.—SARATOGA SPRINGS, N. Y.
E. T. Tappan, President.
W. E. Sheldon, Secretary.
N. A. Calkins, Treasurer.

1884.—MADISON, WIS.
Thomas W. Bicknell, President.
H. S. Tarbell, Secretary.
N. A. Calkins, Treasurer.

1885.—SARATOGA SPRINGS, N. Y.
F. Louis Soldan, President.
W. E. Sheldon, Secretary.
N. A. Calkins, Treasurer.

1886.—TOPEKA, KAN.
N. A. Calkins, President.
W. E. Sheldon, Secretary.
E. C. Hewett, Treasurer.

1887.—CHICAGO, ILL.
W. E. Sheldon, President.
J. H. Canfield, Secretary.
E. C. Hewett, Treasurer.

1888.—SAN FRANCISCO, CAL.
Aaron Gove, President.
J. H. Canfield, Secretary.
E. C. Hewett, Treasurer.

1889.—NASHVILLE, TENN.
Albert P. Marble, President.
J. H. Canfield, Secretary.
E. C. Hewett, Treasurer.

1890.—ST. PAUL, MINN.
J. H. Canfield, President.
W. R. Garrett, Secretary.
E. C. Hewett, Treasurer.

1891.—TORONTO, ONTARIO.
W. R. Garrett President.
E. H. Cook, Secretary.
J. M. Greenwood, Treasurer.

1892.—SARATOGA SPRINGS, N. Y.
E. H. Cook, President.
R. W. Stevenson, Secretary.
J. M. Greenwood, Treasurer.

1893.—CHICAGO, ILL.
(International Congress of Education.)
Albert G. Lane, President.
Irwin Shepard, Secretary.
J. M. Greenwood, Treasurer.

1894.—ASBURY PARK, N. J.
Albert G. Lane, President.
Irwin Shepard, Secretary.
J. M. Greenwood, Treasurer.

1895.—DENVER, COLO.
Nicholas M. Butler, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1896.—BUFFALO, N. Y.
Newton C. Dougherty, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1897.—MILWAUKEE, WIS.
Charles R. Skinner, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1898.—WASHINGTON, D. C.
J. M. Greenwood, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

NATIONAL EDUCATIONAL ASSOCIATION

OF THE UNITED STATES

OFFICERS FOR 1897-98

GENERAL ASSOCIATION

JAMES M. GREENWOOD	*President*	Kansas City, Mo.
IRWIN SHEPARD	*Secretary*	Winona, Minn.
I. C. McNEILL	*Treasurer*	West Superior, Wis.

VICE-PRESIDENTS

Charles R. Skinner, Albany, N. Y.
George J. Ramsey, Clinton, La.
J. L. Holloway, Fort Smith, Ark.
E. Oram Lyte, Millersville, Pa.
James M. Ralston, Asbury Park, N. J.
Miss Margaret W. Sutherland, Columbus, O.
L. D. Harvey, Milwaukee, Wis.
W. W. Stetson, Auburn, Me.
Hiram Hadley, Albuquerque, N. M.
W. H. H. Beadle, Madison, S. D.
John E. McCahan, Baltimore, Md.
S. T. Black, Sacramento, Cal.

BOARD OF TRUSTEES

(See *Art. IV, secs. 9 and 10, of the constitution.*)

Albert G. Lane	*Chairman*	Chicago, Ill.
Nicholas Murray Butler	*Secretary*	New York, N. Y.
Nicholas Murray Butler	New York, N. Y	Term expires July, 1898
Albert G. Lane	Chicago, Ill	Term expires July, 1899
J. Ormond Wilson	Washington, D. C	Term expires July, 1900
F. Louis Soldan	St. Louis, Mo	Term expires July, 1901
James M. Greenwood	Kansas City, Mo	*Ex officio*

EXECUTIVE COMMITTEE

(See *Art. IV, sec. 2, of the constitution.*)

James M. Greenwood	*President*	Kansas City, Mo.
Charles R. Skinner	*First Vice-President*	Albany, N. Y.
Irwin Shepard	*Secretary*	Winona, Minn.
I. C. McNeill	*Treasurer*	West Superior, Wis.
Albert G. Lane	*Chairman Board of Trustees*	Chicago, Ill.

BOARD OF DIRECTORS

Directors ex officio

(See *Art. IV, sec. 2, of the constitution.*)

James M. Greenwood, Kansas City, Mo.
Charles R. Skinner, Albany, N. Y.
Irwin Shepard, Winona, Minn.
I. C. McNeill, West Superior, Wis.
Albert G. Lane, Chicago, Ill.

Life Directors

(See *Art. IV, sec. 2, of the constitution.*)

Bicknell, Thomas W., Providence, R. I.
Brown, Leroy D., San Luis Obispo, Cal.
Butler, Nicholas Murray, New York, N. Y.
Canfield, James H., Columbus, O.
Cook, E. H., Yonkers, N. Y.
Day, L. W., Canton, O.
Dougherty, Newton C., Peoria, Ill.
Fairchild, George T., Berea, Ky.
Garrett, W. R., Nashville, Tenn.
Gove, Aaron, Denver, Colo.
Graham, H. A., Mt. Pleasant, Mich.
Greenwood, J. M., Kansas City, Mo.
Hall, Caleb G., New Berlin, N. Y.
Harris, W. T., Washington, D. C.
Hunt, Mary H., Boston, Mass.
Jewett, A. V., Abilene, Kan.
Lane, Albert G., Chicago, Ill.
Marble, Albert P., New York, N. Y.

Life Directors—*continued*

Marshall, T. Marcellus, Glenville, W. Va.
Northrop, B. G., Clinton, Conn.
Parker, Charles I., South Chicago, Ill.
Phelps, W. F., St. Paul, Minn.
Pickard, Josiah L., Iowa City, Ia.
Pike, Joshua, Jerseyville, Ill.
Richards, Zalmon, Washington, D. C.
Rickoff, Andrew J., Berkeley, Cal.
Sheldon, W. E., Boston, Mass.
Skinner, Charles R., Albany, N. Y.
Smart, James H., Lafayette, Ind.
Soldan, F. Louis, St. Louis, Mo.
Stratton, C. C., University Park, Ore.
Taylor, A. R., Emporia, Kan.
White, Charles G., Lake Linden, Mich.
White, E. E., Columbus, O.
Wilson, J. Ormond, Washington, D. C.

Directors by Election

North Atlantic Division

Maine	John S. Locke	Saco
New Hampshire	Channing Folsom	Dover
Vermont	Mason S. Stone	Montpelier
Massachusetts	A. G. Boyden	Bridgewater
Rhode Island	Gilman C. Fisher	Pawtucket
Connecticut	F. E. Howard	Bridgeport
New York	A. S. Downing	Albany
New Jersey	James M. Green	Trenton

South Atlantic Division

Pennsylvania	S. T. Skidmore	Philadelphia
Delaware	A. H. Berlin	Wilmington
Maryland	Henry A. Wise	Baltimore
District of Columbia	W. B. Powell	Washington
Virginia	E. C. Glass	Lynchburg
West Virginia	W. H. Anderson	Wheeling
North Carolina	Charles D. McIver	Greensboro
South Carolina	W. H. Hand	Chester
Florida	Oscar Clute	Lake City

South Central Division

Kentucky	E. W. Weaver	Paris
Tennessee	Wharton S. Jones	Memphis
Georgia	W. M. Slaton	Atlanta
Alabama	John T. Gregory	Mobile
Mississippi	E. E. Bass	Greenville
Louisiana	Warren Easton	New Orleans
Texas	George T. Winston	Austin
Oklahoma	David R. Boyd	Norman
Arkansas	George B. Cook	Hot Springs

North Central Division

Ohio	F. B. Dyer	Madisonville
Indiana	Edward Ayres	Lafayette
Illinois	J. H. Collins	Springfield
Michigan	Henry R. Pattengill	Lansing
Wisconsin	Miss Mae E. Schreiber	Milwaukee
Iowa	W. M. Beardshear	Ames
Minnesota	C. M. Jordan	Minneapolis
Missouri	John R. Kirk	Jefferson City
North Dakota	W. L. Stockwell	Grafton
South Dakota	A. H. Avery	Woonsocket
Nebraska	C. G. Pearse	Omaha
Kansas	John Macdonald	Topeka

Western Division

Montana	J. E. Klock.	Helena
Wyoming	Miss Estelle Reel	Cheyenne
Colorado	L. C. Greenlee	Denver
New Mexico	C. M. Light	Silver City
Arizona	Miss Lydia L. Hunt	San Carlos

Directors by Election—*continued*

Western Division — continued

Utah	J. M. Tanner	Logan
Nevada	J. E. Stubbs	Reno
Idaho	J. C. Black	Albion
Washington	R. S. Bingham	Tacoma
Oregon	E. B. McElroy	Eugene
California	Elmer E. Brown	Berkeley

DEPARTMENT OFFICERS

National Council

CHARLES De GARMO	*President*	Swarthmore, Pa.
WILLIAM F. KING	*Vice-President*	Mt. Vernon, Ia.
Miss BETTIE A. DUTTON	*Secretary*	Cleveland, O.
B. A. HINSDALE	*Executive Committee*	Ann Arbor, Mich.
J. H. PHILLIPS	*Executive Committee*	Birmingham, Ala.
CHARLES H. KEYES	*Executive Committee*	Holyoke, Mass.
WALTER L. HERVEY	*Executive Committee*	New York, N. Y.

Kindergarten

Miss MARY C. McCULLOCH	*President*	St. Louis, Mo.
Miss JENNY B. MERRILL	*Vice-President*	New York, N. Y.
Miss MARY F. HALL	*Secretary*	Milwaukee, Wis.

Elementary

WILLIAM N. HAILMANN	*President*	Washington, D. C.
R. H. HALSEY	*Vice-President*	Binghamton, N. Y.
Miss HARRIET E. SMITH	*Secretary*	Milwaukee, Wis.

Secondary

GEORGE B. AITON	*President*	Minneapolis, Minn.
Mrs. MAY WRIGHT SEWALL	*Vice-President*	Indianapolis, Ind.
E. G. COOLEY	*Secretary*	LaGrange, Ill.

Higher

R. H. JESSE	*President*	Columbia, Mo.
A. T. ORMOND	*Vice-President*	Princeton, N. J.
HENRY WADE ROGERS	*Secretary*	Evanston, Ill.

Normal

H. H. SEERLEY	*President*	Cedar Falls, Ia.
Miss ROSE C. SWART	*Vice-President*	Oshkosh, Wis.
F. B. PALMER	*Secretary*	Fredonia, N. Y.

Superintendence

N. C. SCHAEFFER	*President*	Harrisburg, Pa.
F. B. COOPER	*First Vice-President*	Des Moines, Ia.
E. H. MARK	*Second Vice-President*	Louisville, Ky.
W. L. STEELE	*Secretary*	Galesburg, Ill.

Manual and Industrial

EDWARD O. SISSON	*President*	Peoria, Ill.
WILLIAM R. LAZENBY	*Vice-President*	Columbus, O.
JUDSON E. HOYT	*Secretary*	Menomonie, Wis.

Art

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D. R. AUGSBURG	*Vice-President*	Salt Lake City, Utah
Miss FLORENCE B. HIMES	*Secretary*	Albany, N. Y.

Music

O. E. McFADON	*President*	Minneapolis, Minn.
Mrs. EMMA A. THOMAS	*Vice-President*	Detroit, Mich.
Miss S. LILLIAN BYINGTON	*Secretary*	Moline, Ill.

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A. N. PALMER	*First Vice-President*	Cedar Rapids, Ia.
W. F. LYON	*Second Vice-President*	Detroit, Mich.
D. M. WILLIS	*Secretary*	Morgantown, W. Va.
ALLAN DAVIS	*Chairman Executive Committee*	Washington, D. C.

Child-Study

M. V. O'SHEA	*President*	Madison, Wis.
MISS SARAH A. STEWART	*Vice-President*	Philadelphia, Pa.
G. W. A. LUCKEY	*Secretary*	Lincoln, Neb.

Physical Training

C. E. EHINGER	*President*	West Chester, Pa.
MISS R. ANNA MORRIS	*Vice-President*	Cleveland, O.
H. B. BOICE	*Secretary*	Trenton, N. J.

Science

P. C. FREER	*President*	Ann Arbor, Mich.
C. N. COBB	*Vice-President*	Albany, N. Y.
C. J. LING	*Secretary*	Denver, Colo.

School Administration

JOHN E. BRANDEGEE	*President*	Utica, N. Y.
KENTON CHICKERING	*First Vice-President*	Oil City, Pa.
CHARLES QUARLES	*Second Vice-President*	Milwaukee, Wis.
WILLIAM GEORGE BRUCE	*Secretary*	Milwaukee, Wis.
WILLIAM S. MACK	*Chairman Executive Committee*	Aurora, Ill.

Library

L. D. HARVEY	*President*	Milwaukee, Wis.
J. H. VAN SICKLE	*Vice-President*	Denver, Colo.
MISS MYRTILLA AVERY	*Secretary*	Albany, N. Y.

Deaf, Blind, etc.

JOSEPH C. GORDON	*President*	Jacksonville, Ill.
MISS SARAH FULLER	*Vice-President*	Boston, Mass.
MISS MARY McCOWEN	*Secretary and Treasurer*	Chicago, Ill.

NATIONAL EDUCATIONAL ASSOCIATION

OF THE UNITED STATES

OFFICERS FOR 1898-99

GENERAL ASSOCIATION

E. ORAM LYTE	*President*	Millersville, Pa.
IRWIN SHEPARD	*Secretary*	Winona, Minn.
I. C. McNEILL	*Treasurer*	West Superior, Wis.

VICE-PRESIDENTS

James M. Greenwood, Kansas City, Mo.
W. W. Stetson, Auburn, Me.
E. B. Prettyman, Baltimore, Md.
H. C. White, Georgia.
Joseph Swain, Bloomington, Ind.
J. R. Rightsell, Little Rock, Ark.
R. S. Bingham, Tacoma, Wash.
Frank P. Smith, Lawrence, Kan.
E. B. McElroy, Eugene, Ore.
McHenry Rhoads, Frankfort, Ky.
J. Y. Joyner, Greensboro, N. C.
S. N. Hopkins, Guthrie, Okla.

BOARD OF TRUSTEES

(See *Art. IV, secs. 9 and 10, of the constitution.*)

Albert G. Lane	*Chairman*	Chicago, Ill.
Nicholas Murray Butler	*Secretary*	New York, N. Y.
Albert G. Lane	Chicago, Ill.	Term expires July, 1899
J. Ormond Wilson	Washington, D. C.	Term expires July, 1900
F. Louis Soldan	St. Louis, Mo.	Term expires July, 1901
Nicholas Murray Butler	New York, N. Y.	Term expires July, 1902
E. Oram Lyte	Millersville, Pa.	*Ex officio*

EXECUTIVE COMMITTEE

(See *Art. IV, secs. 2 and 11, of the constitution.*)

E. Oram Lyte	*President*	Millersville, Pa.
James M. Greenwood	*First Vice-President*	Kansas City, Mo.
I. C. McNeill	*Treasurer*	West Superior, Wis.
Albert G. Lane	*Chairman Board of Trustees*	Chicago, Ill.
W. T. Harris		Washington, D. C.
Irwin Shepard	*Secretary*	Winona, Minn.

BOARD OF DIRECTORS

Directors ex officio

(See *Art. IV, sec. 2, of the constitution.*)

E. Oram Lyte, Millersville, Pa.
James M. Greenwood, Kansas City, Mo.
Irwin Shepard, Winona, Minn.
I. C. McNeill, West Superior, Wis.
Albert G. Lane, Chicago, Ill.

Life Directors

(See *Art. IV, sec. 2, of the constitution.*)

Bicknell, Thomas W., Providence, R. I.
Brown, Leroy D., San Luis Obispo, Cal.
Butler, Nicholas Murray, New York, N. Y.
Canfield, James H., Columbus, O.
Cook, E. H., Yonkers, N. Y.
Day, L. W., Canton, O.
Dougherty, Newton C., Peoria, Ill.
Fairchild, George T., Berea, Ky.
Garrett, W. R., Nashville, Tenn.
Gove, Aaron, Denver, Colo.
Graham, H. A., Mt. Pleasant, Mich.
Greenwood, J. M., Kansas City, Mo.

Life Directors—*continued*

Hall, Caleb G., New Berlin, N. Y.
Harris, W. T., Washington, D. C.
Hunt, Mary H., Boston, Mass.
Jewett, A. V., Abilene, Kan.
Lane, Albert G., Chicago, Ill.
Marble, Albert P., New York, N. Y.
Marshall, T. Marcellus, Glenville, W. Va.
Parker, Charles I., South Chicago, Ill.
Phelps, W. F., St. Paul, Minn.
Pickard, Josiah L., Iowa City, Ia.
Pike, Joshua, Jerseyville, Ill.
Richards, Zalmon, Washington, D. C.
Rickoff, Andrew J., Berkeley, Cal.
Sheldon, W. E., Boston, Mass.
Skinner, Charles R., Albany, N. Y.
Smart, James H., Lafayette, Ind.
Soldan, F. Louis, St. Louis, Mo.
Stratton, C. C., University Park, Ore.
Taylor, A. R., Emporia, Kan.
White, Charles G., Lake Linden, Mich.
White, E. E., Columbus, O.
Wilson, J. Ormond, Washington, D. C.

Directors by Election

North Atlantic Division

Maine	John S. Locke	Saco
New Hampshire	Channing Folsom	Dover
Vermont	Mason S. Stone	Montpelier
Massachusetts	Will S. Monroe	Westfield
Rhode Island	H. S. Tarbell	Providence
Connecticut	F. E. Howard	Bridgeport
New York	A. S. Downing	Albany
New Jersey	James M. Green	Trenton

South Atlantic Division

Pennsylvania	George Howell	Scranton
Delaware	A. H. Berlin	Wilmington
Maryland	John D. Worthington	Belair
District of Columbia	W. B. Powell	Washington
Virginia	William F. Fox	Richmond
West Virginia	J. N. Deahl	West Liberty
North Carolina	G. A. Grimsley	Greensboro
South Carolina	J. Frank Fooshe	Blackville
Florida	L. W. Buchholz	Tampa

South Central Division

Kentucky	W. H. Bartholomew	Louisville
Tennessee	W. R. Payne	Nashville
Georgia	W. F. Slaton	Atlanta
Alabama	John T. Gregory	Mobile
Mississippi	E. E. Bass	Greenville
Louisiana	Warren Easton	New Orleans
Texas	O. H. Cooper	Carthage
Oklahoma	David R. Boyd	Norman
Arkansas	J. L. Holloway	Fort Smith
Indian Territory	W. A. Caldwell	....

North Central Division

Ohio	C. W. Bennett	Piqua
Indiana	David K. Goss	Indianapolis
Illinois	E. A. Gastman	Decatur
Michigan	Henry R. Pattengill	Lansing
Wisconsin	L. D. Harvey	Milwaukee
Iowa	W. M. Beardshear	Ames
Minnesota	George B. Aiton	Minneapolis
Missouri	John R. Kirk	Jefferson City
North Dakota	W. L. Stockwell	Grafton
South Dakota	Frank Crane	Aberdeen
Nebraska	Carroll G. Pearse	Omaha

Western Division

Montana	J. P. Hendricks	Butte
Wyoming	Estelle Reel	Cheyenne
Colorado	L. C. Greenlee	Denver
New Mexico	Mrs. E. R. Jackson	Silver City
Arizona	F. S. Hafford	Prescott

Directors by Election—*continued*

Western Division—continued

Utah	J. M. Tanner	Logan
Nevada	J. E. Stubbs	Reno
Idaho	J. C. Black	Albion
Washington	O. C. Whitney	Tacoma
Oregon	J. H. Ackerman	Portland
California	Elmer E. Brown	Berkeley

DEPARTMENT OFFICERS

National Council

A. R. TAYLOR	*President*	Emporia, Kan.
JAMES H. VAN SICKLE	*Vice-President*	Denver, Colo.
Miss BETTIE A. DUTTON	*Secretary*	Cleveland, O.
JOHN DEWEY	*Executive Committee*	Chicago, Ill.
NICHOLAS MURRAY BUTLER	*Executive Committee*	New York, N. Y.
L. H. JONES	*Executive Committee*	Cleveland, O.

Kindergarten

Mrs. MARIA KRAUS-BOELTE	*President*	New York, N. Y.
Miss FLORENCE LAWSON	*Vice-President*	Los Angeles, Cal.
Miss ALICE M. PARKER	*Secretary*	Washington, D. C.

Elementary

WILLIAM N. HAILMANN	*President*	Dayton, O.
J. W. CARR	*Vice-President*	Anderson, Ind.
Miss E. V. BROWN	*Secretary*	Washington, D. C.

Secondary

EDWARD F. HERMANNS	*President*	Denver, Colo.
W. F. WEBSTER	*Vice-President*	Minneapolis, Minn.
RALPH R. UPTON	*Secretary*	Chillicothe, O.

Higher

ROBERT B. FULTON	*President*	University, Miss.
ELMER E. BROWN	*Vice-President*	Berkeley, Cal.
G. A. TAWNEY	*Secretary*	Beloit, Wis.

Normal

THEODORE B. NOSS	*President*	California, Pa.
Miss MARION BROWN	*Vice-President*	New Orleans, La.
J. N. WILKINSON	*Secretary*	Emporia, Kan.

Superintendence

E. H. MARK	*President*	Louisville, Ky.
G. H. CONLEY	*First Vice-President*	Boston, Mass.
A. T. BARRETT	*Second Vice-President*	Chattanooga, Tenn.
J. H. VAN SICKLE	*Secretary*	Denver, Colo.

Manual and Industrial

JUDSON E. HOYT	*President*	Menomonie, Wis.
Miss PERLA G. BOWMAN	*Vice-President*	Columbus, O.
CHARLES A. BENNETT	*Secretary*	Peoria, Ill.

Art

WILLIAM A. MASON	*President*	Philadelphia, Pa.
CHARLES F. WHEELOCK	*Vice-President*	Albany, N. Y.
Miss M. A. WOODMANSEE	*Secretary*	Duluth, Minn.
Miss HARRIET CECIL MAGEE	*Executive Committee*	Oshkosh, Wis.
Miss GERTRUDE EDMUND	*Executive Committee*	Lowell, Mass.
LANGDON S. THOMPSON	*Executive Committee*	Jersey City, N. J.

Music

P. C. HAYDEN	*President*	Quincy, Ill.
Miss MARY A. GRANDY	*Vice-President*	Springfield, Mass.
Miss LUCY ROBINSON	*Secretary*	Wheeling, W. Va

Business

ALLAN DAVIS	*President*	Washington, D. C.
J. O. CRISSY	*First Vice-President*	Albany, N. Y.
COURT F. WOOD	*Second Vice-President.*	Washington, D. C.
W. C. STEVENSON	*Secretary*	Emporia, Kan.
CARL C. MARSHALL	*Chairman Executive Committee*	Battle Creek, Mich.

Child-Study

WILL S. MONROE	*President*	Westfield, Mass.
REUBEN POST HALLECK	*Vice-President*	Louisville, Ky.
Mrs. ALICE W. COOLEY	*Secretary*	Minneapolis, Minn.

Physical Training

GEORGE W. FITZ	*President*	Cambridge, Mass.
WILLIAM O. KROHN	*First Vice-President*	Hospital, Ill.
Miss ELLEN LeGARDE	*Second Vice-President*	Providence, R. I.
Miss REBECCA STONEROAD	*Secretary*	Washington, D. C.

Science

CHARLES NEWELL COBB	*President*	Albany, N. Y.
ALBERT H. TUTTLE	*Vice-President*	Charlottesville, Va.
CHARLES J. LING	*Secretary*	Denver, Colo.

School Administration

E. F. BRADT	*President*	Ishpeming, Mich.
CHARLES BULKLEY HUBBELL	*First Vice-President*	New York, N. Y.
JOHN F. HUGHES	*Second Vice-President*	Utica, N. Y.
WILLIAM S. MACK	*Third Vice-President*	Aurora, Ill.
WILLIAM GEORGE BRUCE	*Secretary*	Milwaukee, Wis.
P. N. SIGLER	*Chairman Executive Committee*	Dayton, O.

Library

L. D. HARVEY	*President*	Milwaukee, Wis.
J. H. VAN SICKLE	*Vice-President*	Denver, Colo.
Miss MYRTILLA AVERY	*Secretary*	Albany, N. Y.

Deaf, Blind, etc.

JOSEPH C. GORDON	*President*	Jacksonville, Ill.
Mrs. JENNIE BRIGHT HOLDEN	*V.-Pres. Subdept. for the Deaf*	San Francisco, Cal.
FRANK H. HALL	*V.-Pres. Subdept. for the Blind*	Jacksonville, Ill.
A. E. OSBORNE	*V.-P. Subdept. for Ment. Deficient*	Glen Ellen, Cal.
Miss MARY McCOWEN	*Secretary and Treasurer*	Chicago, Ill.

TREASURER'S REPORT

TO THE

NATIONAL EDUCATIONAL ASSOCIATION

JULY 1, 1897, TO JULY 1, 1898

MEETING AT MILWAUKEE, WIS., 1897

I. C. McNeill, Treasurer, in account with the National Educational Association

DR.

To balance from last report, in Union National Bank of Denver, unavailable	$ 528.59	
To balance from last report, cash in hand, available	584.27	
		$ 1,112.86
To delayed receipts from Buffalo meeting:		
Nickel Plate Route	$1,171.00	
Columbus & Hocking Railway	10.00	
Boston & Albany Railway	232.00	
Fitchburg Railroad Co	142.00	
Evansville & Terre Haute Railway	82.00	
Erie Railway	26.00	
Canadian Pacific Railway	12.00	
		$ 1,675.00
To cancellation of orders 550 and 560		111.35
To memberships collected at Chattanooga, meeting of Department of Superintendence		144.00
To moneys from chairman Board of Trustees:		
Copyright, Committee of Ten	$ 55.80	
Copyright, Committee of Fifteen	41.15	
Interest on Permanent Funds	2,550.34	
		$ 2,647.29
To University of Kansas, sale of volumes		22.50
To redeemed railway ticket, sold to scalper at Indianapolis, February, 1897		19.00
To receipts from Secretary:		
774 memberships and 28 enrollment fees	$1,604.23	
Back volumes sold	1,375.63	
Report of Committee of Twelve, etc.	453.76	
		$ 3,433.62
To sundry dues collected by Treasurer		6.00
To memberships collected by terminal lines at Milwaukee		9,761.35
To cash memberships and other collections at Milwaukee		2,345.75
To memberships, collected by railroads, not reported to terminal lines		627.65
Total		$22 906.37

CR.

By items due last year:		
Henry Sabin, expense Committee of Twelve (783)	$ 960.92	
Irwin Shepard, salary March, April, May, and June, 1897 (798)	500.00	
		$ 1,460.92
By expense Board of Trustees:		
H. S. Tarbell, traveling (785)	$ 78.47	
A. G. Lane, telegrams and stationery (802)	4.75	
A. G. Lane, traveling (840)	44.65	
J. Ormond Wilson, rent of depository (808, 813, 819, 841)	100.00	
J. Ormond Wilson, expense, freight, etc. (808, 814, 819, 830, 841)	24.63	
		$ 252.50

By expense Department of Superintendence, Chattanooga, Tenn.:		
President N. C. Schaeffer (836)	$ 76.80	
R. P. Felch, stenographer (846)	4.00	
University of Chicago, 1,000 reports of meeting, Department of Superintendence (851)	427.75	
		$ 508.55
By expenses Milwaukee meeting:		
David S. Geer, stenographer (787)	$ 102.55	
Miss F. A. Elmer, clerical help, Secretary's office (797)	21.00	
Printing, stationery, and telegrams (799, 792, 788, 789, 803)	201.08	
Twenty-two clerks, Treasurer's department (796)	694.00	
State managers (807, 811)	551.35	
Refunded memberships (804, 810, 823, 843)	132.00	
Departments (806)	282.85	
		$ 1,984.83
By expenses members of Executive Committee:		
President Charles R. Skinner, clerical help, telegrams, traveling, etc. (800, 805, 825)	$ 250.29	
Vice-President N. C. Dougherty, traveling (794)	68.10	
President J. M. Greenwood, stenographer, 8 months (821, 842)	120.00	
Traveling, stationery, telegrams, etc. (820, 839)	99.60	
Secretary Irwin Shepard:		
Postage	335.03	
Telegrams	79.83	
Stationery and miscellaneous office expense	79.04	
Express and freight	59.76	
Stenographers and clerks	457.00	
Traveling (795, 801, 816, 826, 837, 844)	156.83	
Treasurer I. C. McNeill, traveling	141.80	
Postage, telegrams, stationery, etc. (812, 823, 843)	24.57	
		$ 1,871.85
By expenses of volume and circulars:		
University of Chicago, volume, index, etc. (784, 786, 818, 831, 832)	$5,219.35	
Jones & Kroeger, circulars (790, 817, 827, 845)	503.10	
R. R. Donnelley & Sons, printing lists of members (829, 835)	168.78	
Express on volumes and circulars (703, 828, 833, 834, 847)	1,696.33	
		$ 7,587.56
By salaries of officers:		
Secretary Irwin Shepard (815, 838, 849)	$1,500.00	
Treasurer I. C. McNeill (824, 848)	750.00	
		$ 2,250.00
By expense Treasurer's bonds:		
Sunderland & Ostrander (809)		$ 50.00
By transfer to permanent funds (822, 850)		4,738.25
Disbursements		$20,704.46

SUMMARY

By total disbursed as above		$20,704.46
*By balance, cash unavailable (Denver)	$ 132.23	
By balance, cash in hand	2,069.68	
		$ 2,201.91
Total		$22,906.37

Respectfully submitted,

I. C. McNeill,

Treasurer, National Educational Association.

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* The Union National Bank of Denver during the year declared dividends to the amount of three hundred ninety-six and $\frac{36}{100}$ dollars ($396.36), leaving the unavailable balance mentioned above.

WEST SUPERIOR, WIS., June 30, 1898.

To the Board of Trustees of the National Educational Association:

I hereby certify that I have personally examined the books of I. C. McNeill, Treasurer, that I have compared them with accomplished checks, and orders issued by the chairman of the Board of Trustees, and find them and this report correct to the best of my knowledge and belief.

(Signed) OSCAR HALVERSON,
Accountant.

Sworn and subscribed in my presence this 30th day of June, 1898.

(Signed) LEONA PINKHAM,
Notary Public.

NOTES

The figures in marks of parenthesis refer to the numbered orders issued by the chairman of the Board of Trustees. No bills are paid except on such orders.

During the past three years the sum of $21,515.30, nearly one-third of the permanent funds, has been turned over to the Board of Trustees.

The total income for the past three years is $72,681.70, of which over $12,000 may be properly credited to methods of collection of revenues employed.

TWELFTH ANNUAL REPORT OF THE BOARD OF TRUSTEES

To the Board of Directors of the National Educational Association:

The Board of Trustees presents the following report of the Permanent Fund of the National Educational Association, and its income, for the year ending June 30, 1898:

Permanent Fund, July 1, 1897		$59,261.75
In the following items:		
Mortgage on real estate	$ 3,000.00	
Kansas school and municipal bonds	33,337.00	
Illinois, Indiana, and Missouri school bonds	21,500.00	
Total investment	$57,837.00	
Cash	1,424.75	
		$59,261.75
Cash transferred to Permanent Fund from proceeds of Milwaukee meeting and from income of Permanent Fund		$ 4,738.25
Total in Permanent Fund, July 1, 1898		$64,000.00
In the following items:		
Mortgage on real estate	$ 8,000.00	
Kansas school and municipal bonds	32,737.00	
Illinois, Indiana, and Missouri school bonds	20,500.00	
Total	$61,237.00	
Cash on hand for investment	2,763.00	
Total		$64,000.00

Income Statement

RECEIPTS

Received interest on Permanent Fund	$ 2,568.47	

DISBURSEMENTS

Paid exchange for coupon collections	$ 3.08		
Paid rent of box in Merchants' Safe Deposit, Chicago	10.00		
Paid express charges for transfer of bonds to Chicago	1.45		
Paid for exchange	3.60		
Total	$ 18.13		
Paid I. C. McNeill, Treasurer, balance	2,550.34		
		$ 2,568.47	
Investment, July 1, 1897			$57,837.00
Bonds paid during the year:			
Crawford Co., Kansas, District No. 4		$ 100.00	
Chicago, Districts Nos. 5, 37, 14		1,000.00	
Scott Co., Kansas, District No. 6		400.00	
Douglas Co., Kansas, Eudora City, Bond No. 6		100.00	
			$ 1,600.00
			$56,237.00
Investments during the year:			
First mortgage, No. 1919 Wabash Ave., Chicago			$ 5,000.00
Investment, July 1, 1898			$61,237.00

STATEMENT OF SECURITIES AND BONDS BELONGING TO THE PERMANENT FUND OF THE NATIONAL EDUCATIONAL ASSOCIATION, JULY 1, 1897

KANSAS SCHOOL BONDS

County	Number of school district	Amount	Rate of interest, per cent.	Interest payable	Bond due
Barton,	66	$330	6	Jan'y and July	January, 1900
Clark,	42	500	6	"	July 1, 1901
Clark,	60	100	6	"	January 1, 1901
Cowley,	143	360	6	"	July 1, 1901
Crawford,	120	200	6	"	January, 1902
Decatur,	35	440	6	"	July, 1901
Ellis,	14	800	6	"	July, 1900
Ellis,†	18	350	6	"	July, 1896
Ellis,	44	800	6	"	July, 1900
Garfield,*	24	800	6	"	January, 1910
Greenwood,	2	200	6	"	$200 July, 1899
Mitchell,†	43	500	6	"	July, 1895
Mitchell,	106	475	6	"	January, 1902
Ness,	41	400	6	"	July, 1898
			6	"	$200, 1902
Ness,	70	500	6	"	July, 1903
Norton,	95	200	6	"	July, 1902
Osborne,	52	310	6	"	July, 1899
Phillips,	63	272	6	"	January, 1900
Pratt,	36	500	6	"	July, 1901
Reno,	51	500	6	"	July, 1902
Reno,	51	500	6	"	July, 1902
Reno,	129	300	6	"	January, 1902
Sheridan,	22	100	6	"	January 1, 1902
Smith,	109	400	6	"	April 1, 1902
Washington,	136	500	6	"	July, 1898
		$10,337			

* Interest in default. † Principal in default.

KANSAS, COUNTY AND MUNICIPAL BONDS

County	Kind of bond	Bond Nos.	Amount	Rate of interest, per cent.	Interest payable	Bond due
Cloud,	City of Concordia,	35 to 40	$3,000	6	January and July	July 1, 1918
Douglass,	Eudora City	7 to 20	1,400	6	March	One due each year March 1
Grant,*	County	47, 48	2,000	6	January and July	February, 1920
Hodgeman,	County	1	1,000	6	January and July	July 1, 1919
Kingman,	Aid bonds	1 to 7	7,000	6	Jan'y 31 and July	August 31, 1919
Lane,*	County	11 to 13	3,000	6	January and July	July, 1918
Marion,*	City of Marion	1	1,000	5½	March and Sept.	March 1, 1900
McPherson,	Sharp's Creek Tp.,	1	1,000	6	January and July	Sept. 1, 1916
Montgomery,	Caney Tp.	1, 2	1,000	6	April and October	October 1, 1916
Reno,*	City of South Hutchinson	1, 2	1,000	7	Febr'y and August	April, 1908
Seward,†	With Bentley & Hatfield, Wichita, Kan.		1,000		Judgment obtained.	
			$22,400			

*Interest in default. † Principal in default.

MISCELLANEOUS

County	Amount	Rate of interest, per cent.	Interest payable	Bond due
Jackson, Kansas City, Mo.,	$2,000	5	January and July	July 1, 1901
Cook, Chicago, Ill.,	1,000	6	March and September	March 10, 1899
Noblesville, Ind.,	5,000	5	January and July	July 1, 1900
DeKalb, Ill.,	3,000	5	April 1	April 1, 1900
Cook, Village of Morgan Park, Ill.,	3,500	5	March and September	September, 1905
Providence real estate, first mortgage,	3,000	6		
Chicago real estate, first mortgage,	5,000	5	May and November	May, 1903
Lemont, Ill., School, Nos. 4, 6, 8, 12, 14, 16, 18, 20, 22, 24, 30, 32,	6,000	5	June and December	Issued $16,000 $1000 due each year, June 1
	$28,500			

RECAPITULATION

Kansas bonds	$32,737
Miscellaneous bonds and real estate mortgage	28,500
Total investment in bonds	$61,237

Albert G. Lane, *Chairman*.
Nicholas Murray Butler.
J. Ormond Wilson.
F. Louis Soldan.
J. M. Greenwood.

The foregoing securities were examined at the Merchants' Safety Deposit Vaults, Chicago, July 5, 1898, and I certify that it is a correct statement of the investments belonging to the Permanent Fund of the National Educational Association in the custody of A. G. Lane, chairman of the Board of Trustees.

(Signed) Orville T. Bright.

JOURNAL OF PROCEEDINGS

OF THE

THIRTY-SEVENTH ANNUAL MEETING

OF THE

NATIONAL EDUCATIONAL ASSOCIATION

WASHINGTON, D. C., JULY 7-12, 1898

FIRST DAY'S PROCEEDINGS

CONVENTION HALL.—FRIDAY EVENING, JULY 7

The association was called to order by President Henry F. Blount of the Local Committee, Washington, D. C.

Rev. Frank M. Bristol, of the Metropolitan M. E. Church of Washington, invoked divine blessing.

Music by the Marine Band.

An address of welcome was made by the president of the Local Committee, Henry F. Blount, of Washington, who also read the following letter from the president of the United States:

EXECUTIVE MANSION, WASHINGTON, July 7, 1898.

My dear Sir: I very much regret that the pressure of official duties will prevent the acceptance of the cordial invitation extended through yourself to attend the opening of the convention of the National Educational Association this evening. It would have been a pleasure to me to have been able to meet the wishes of the association in this respect, and to have welcomed its members to Washington.

In the important educational work which the association has done so much to encourage I have the deepest interest, and believe that the best results must come from such meetings, with their inspiration to even greater achievements than have characterized its work in the past.

Please convey to the members of the association and to your colleagues my best wishes for a most successful convention.

Very sincerely yours,
WILLIAM MCKINLEY.

MR. HENRY F. BLOUNT,
President Local Committee,
National Educational Association,
Washington, D. C.

Addresses of welcome were also made by Hon. John W. Ross, member of the Board of Commissioners, Washington, D. C.; Dr. B. L. Whitman, president of the Columbian University, Washington, D. C.; William T. Harris, United States Commissioner of Education; Hon. Webster Davis, assistant secretary of the interior, Washington, D. C.

The President of the association, James M. Greenwood, of Kansas City, Mo., delivered the annual presidential address.

Hon. Charles R. Skinner, superintendent of public instruction, Albany, N. Y., addressed the association on the "Life and Character of Edward Austin Sheldon."

President Greenwood appointed the following committee on resolutions:

Nicholas Murray Butler, New York, *chairman.*
Livingston C. Lord, Minnesota.
Edwin P. Seaver, Massachusetts.
R. B. Fulton, Mississippi.
O. T. Corson, Ohio.
Andrew S. Draper, Illinois.
Oscar H. Cooper, Texas.
James M. Green, New Jersey.
J. H. Miller, Nebraska.
E. A. Alderman, North Carolina.

The Secretary read the following announcement:

The Board of Directors, at its meeting today, has considered, approved, and unanimously recommended for adoption an amendment to the constitution providing for the election of the Secretary of the association for a term of years by the corporate body of the association, and for constituting the United States Commissioner of Education *ex officio* a member of the Executive Committee.

And notice is hereby given that the same will be presented for the consideration of the active members of the association at the business session to be held at the Grand Opera House on July 9, at 12 o'clock M.

The audience joined in singing "America," with accompaniment by the Marine Band.

Adjourned to meet at 9:15 A. M., July 8, at the Grand Opera House and the New National Theater, Washington.

SECOND DAY'S PROCEEDINGS

GRAND OPERA HOUSE.—FRIDAY, JULY 8, 9:15 A. M.

The convention was called to order by the First Vice-President, Charles R. Skinner, of New York.

Invocation by Father D. J. Stafford, of Saint Patrick's Church, Washington, D. C.

Principal W. F. Gordy, of Hartford, Conn., addressed the association on "The Essentials in United States History to be Taught in Elementary Schools."

President H. H. Seerley, State Normal School, Cedar Falls, Ia., spoke on "The Essentials in United States History to be Taught in Secondary Schools."

Music—"The Star-Spangled Banner"—by Miss Lillian Sefton, of Washington, D.C.

Mr. U. G. Palmer, county examiner, Oakland, Md., discussed the paper of Principal Gordy.

Principal W. G. Lansdon of the high school, Fort Scott, Kan., discussed President Seerley's paper.

The subject of the morning was further discussed by Superintendent R. K. Buehrle, of Lancaster, Pa.; Hon. E. B. Prettyman, of Maryland; Superintendent L. E. Wolf, of Kansas City, Mo.; Superintendent David K. Goss, of Indiana; Dr. Charles A. McMurry, of Illinois, and William H. Beach, of Milwaukee, Wis.

Adjourned.

NEW NATIONAL THEATER.—JULY 8, 9:15 A. M.

The session was called to order by President Greenwood.

Rev. Lucien Clark, of Foundry M. E. Church, opened the session with prayer.

President Greenwood then surrendered the gavel to Vice-President George J. Ramsey, of Louisiana.

Dr. Edward R. Shaw, dean of pedagogy, New York University, New York city, read a paper on "The Essentials of English Composition to be Taught in Elementary Schools."

Professor C. C. Thach, State Polytechnic Institute, Auburn, Ala., read a paper on "The Essentials of English Composition to be Taught in Secondary Schools."

The discussion of the first paper was opened by Superintendent F. S. Hafford, of Prescott, Ariz..

Miss Lillian Sefton, of Washington, sang "The Star-Spangled Banner."

Adjourned to 8 P. M., July 8

GRAND OPERA HOUSE.—FRIDAY, JULY 8, 8 P. M.

The session was called to order by Hon. John R. Kirk, of Missouri.

Dr. A. S. Draper, president of the University of Illinois, delivered an address on "American Universities and the National Life."

The Committe on Nominations was announced as follows

NOMINATING COMMITTEE

APPOINTED IN ACCORDANCE WITH SEC. 1 OF THE BY-LAWS

North Atlantic Division

Massachusetts	Wiliam E. Sheldon, *chairman*	Rhode Island	Walter Ballou Jacobs
Maine	John S. Locke	Connecticut	F. E. Howard
New Hampshire	J. A. Russell	New York	Charles R. Skinner
Vermont	Mason S. Stone	New Jersey	H. Brewster Willis

South Atlantic Division

Pennsylvania	Nathan C. Schaeffer	West Virginia	T. Marcellus Marshall
Delaware	A. H. Berlin	North Carolina	Charles D. McIver
Maryland	John E. McCahan	South Carolina	W. H. Hand
District of Columbia	J. Ormond Wilson	Florida	W. N. Sheats
Virginia	William F. Fox		

South Central Division

Kentucky	W. H. Bartholomew	Louisiana	Miss H. A. Sutor
Tennessee	W. R. Garrett	Texas	R. E. Miller
Georgia	W. M. Slaton	Oklahoma	D. R. Boyd
Alabama	J. B. Cunningham	Arkansas	George B. Cook
Mississippi	J. C. Fant		

North Central Division

Ohio	S. T. Dial	Minnesota	F. V. Hubbard
Indiana	David K. Goss	Missouri	F. D. Tharpe
Illinois	J. H. Freeman	North Dakota	Mrs. Helen H. Stockwell
Michigan	Jason E. Hammond	South Dakota	A. H. Avery
Wisconsin	William George Bruce	Nebraska	J. I. Reed
Iowa	J. T. Merrill	Kansas	John MacDonald

Western Division

Montana	J. P. Hendricks	Washington	O. C. Whitney
Wyoming	Miss Estelle Reel	Utah	J. F. Millspaugh
Colorado	L. C. Greenlee	California	J. A. Foshay
New Mexico	Mrs. Elizabeth R. Jackson	Indian Territory	L. W. Williams
Arizona	F. S. Hafford	Nevada	Walter C. Gayhart
Oregon	E. B. McElroy		

Adjourned to meet at 9:15 A. M , July 11.

NEW NATIONAL THEATER.—FRIDAY, JULY 8, 8 P. M.

The meeting was called to order by Dr. E. O. Lyte, Vice-President for Pennsylvania.

Hon. William T. Harris, United States Commissioner of Education, spoke on "Our Educational Exhibit at the International Exposition in Paris in 1900."

Music by Chicago Quartet Club.

Hon. W. W. Stetson, state superintendent of public instruction, Auburn, Me., addressed the association on "The Educational Outlook."

The Committee on Nominations, as noted above, was announced by Vice-President Lyte.

Adjourned to 9:15 A. M., July 9.

THIRD DAY'S PROCEEDINGS

GRAND OPERA HOUSE.—SATURDAY, JULY 9, 9:15 A. M.

The meeting was called to order by Hon. W. W. Stetson, Vice-President for Maine.

Music —"Hurrah for the Schools of Ohio"—rendered by a chorus of Ohio teachers, under the leadership of Dr. A. J. Gantvoort, of Ohio.

Invocation by Rev. J. G. Butler, of Luther Place Memorial Church.

Professor Jacques W. Redway, geographer, Mount Vernon, N. Y., addressed the association on the "Influence of Topography and Climate on the Historical Development of the United States."

Mr. W. J. McGee, vice-president of the National Geographic Society, Washington, spoke on the subject of "The Geospheres."

Music — cornet solo.

The subject of the morning was discussed by Professor George T. Murphy, assistant superintendent of schools, St. Louis, Mo.; Hon. William Stryker, state superintendent of public instruction, Topeka, Kan.; Professor David W. Hoyt, principal English High School, Providence, R. I.

Mr. Luckey, of Pittsburg, offered the following resolution, which, after discussion by T. Marcellus Marshall and others, on motion of Mr. Ossian Lang, of New York, was referred for consideration to the Committee on Resolutions, appointed by the President of the association.

WHEREAS, The commercial interests of the United States with her sister republics on this continent are rapidly increasing in importance, and

WHEREAS, Present occurrences indicate that our trade will soon need fostering in the islands of the sea, and

WHEREAS, All these republics and islands speak the Spanish language; therefore

Resolved, That the attention of the educational authorities is hereby called to the importance of adding the Spanish language to the course of study in all the advanced schools of the nation.

Dr. Mary Walker, of Washington, offered a resolution, which, on motion, was referred to the general Committee on Resolutions.

Adjourned to 8 P. M., July 9.

NEW NATIONAL THEATER.—SATURDAY, JULY 9, 9:15 A. M.

A. S. Downing, supervisor training schools, New York, presided.

Prayer by Rev. Frank Sewall, Swedenborgian Church.

Dr. W. O. Krohn, psychologist, Eastern Illinois Hospital for the Insane, addressed the association on "Minor Mental Abnormalities in Children as Occasioned by Certain Erroneous School Methods."

Music — vocal solo—Miss May Adele Levers.

N. A. Harvey, professor of natural science, State Normal School, West Superior, Wis., spoke on "The Latest Practical Discoveries in Biological Science, and Their Bearing on Education."

Superintendent L. C. Greenlee of School District No. 2, Denver, Colo., led in the discussion.

Superintendent R. K. Buehrle, of Lancaster, Pa., offered the following resolution, which was carried:

Resolved, That the attention of the Commissioner of Education be directed to the paper of Dr. Krohn, and that he be requested to publish and circulate the same as a circular of information for the people.

Music by Miss May Adele Levers.

Adjourned to 9:15 A. M., July 11.

MINUTES OF THE ANNUAL BUSINESS MEETING OF THE ACTIVE MEMBERS

GRAND OPERA HOUSE.—SATURDAY, JULY 9, 12 M.

In the absence of the President, the meeting was called to order by First Vice-President Charles R. Skinner, of New York.

A quorum being present, on the call for unfinished business and under the notice of proposed amendments to the constitution offered by the Board of Directors, Dr. Nicholas Murray Butler, of New York, was recognized, and spoke as follows:

Mr. President, Ladies and Gentlemen of the Association: The Board of Directors of this association, in regular annual meeting held on Thursday afternoon last, gave consideration to a proposition which I then brought forward, and after full and free discussion they unanimously adopted it and recommended it to the association for incorporation in the constitution. I ask your attention for a few moments in order that I may now explain, on behalf of the Board of Directors and as the mover of the proposition, its scope and character. I shall then move, for your consideration, that this amendment be adopted.

The amendment is, in my judgment, one not only of high importance, but of vital interest to the future development of this association, if it is to go forward on the lines that it has recently pursued. I refer to its greatly increased size, to the succession of large and well-attended meetings, and to the increasing complexity of its business administration, involving time, labor, and special knowledge that but very few of us have in our possession or, having it in our possession, would be able to give. It is an amendment to except hereafter from the list of officers to be annually elected by the association the office of Secretary, and to make that officer a paid and permanent servant of the association. By paid and permanent I mean suitably compensated for his services and elected for a term of years.

This proposition is not new in any sense. It has been before the Board of Directors for many years. It has always been favorably considered in principle, but the moment of its adoption has been postponed for two reasons: first, because the time did not seem to have come when our financial condition made it possible; and, second, because some of us (I, for one) have steadfastly opposed the creation of this office, at a time when it was being sought by any active candidate. The time, however, has now come when, as I shall show in a moment, our financial development has put us in a position to sustain this charge, and to sustain it to our own ultimate profit. In addition, the time has come (and I say this on my own responsibility) when I am entirely confident that we shall be able to secure, as our Secretary, the one man whose years of service and whose distinguished fidelity to the interests of this association have put his name upon every lip.

The constitution of this association was amended at the Denver meeting, after careful consideration. We then entered upon a new policy. The distinction then drawn between active and associate members and the qualifications then established for active membership meant that thereafter the business affairs of this association, its high reputation as representative of the teachers of the country, and its distinguished service in conducting three great educational investigations should not be put in jeopardy by being open to assault from any body of excursionists who might happen to buy our railroad tickets and attend one of our great annual gatherings. The line was drawn so that new active members have at all times easy admission to our ranks, but they must always be persons engaged in educational work. This policy distinguished active from associate membership, gave dignity to the active membership, and has made it possible to appeal to men and women who have attended one or more of our meetings in the past, and who have been irregular in attendance, to complete the payment of the fee for the omitted years, and to restore their names to the active list and so join our ranks permanently. In addition to that, we have had made a careful and scientifically prepared analytical index of our back volumes of proceedings, thousands of which are stored in our depository in this city, and an effort has been made to distribute these by sale to new and old members. From these sources a steady income is now derived.

My object in rehearsing these facts, familiar to some of you, but not to all, is to conclude the discussion of this point by saying that during the last three years we have secured an income for the association of twelve thousand dollars ($12,000) — averaging $4,000 a year — from these sources, by reason of the activity of the Secretary, and by reason of the skill shown by the Treasurer in auditing railroad accounts and in collecting coupons that would otherwise have been lost. In other words, we have made $12,000 by good business administration. We have, however, done that at the expense of the gentlemen who have served us. We have asked men to give us time, service, and attention of the most exacting kind, long continued for many months in the year, and we have voted them a small stipend that is ridiculous in comparison with the work they have performed. I shall not pass from this phase of the subject without saying that the National Educational Association today is indebted to Irwin Shepard and I. C. McNeill, in a way that we cannot afford to overlook or fail to recognize. I have been, thru your kind indulgence, in a position for some years to know something about the administration of our business affairs, and I wish to say, for your comfort and satisfaction, that if there is an honester, a better, and more wisely conducted voluntary association than ours in existence, it has not attracted my observation.

But it is undignified, gentlemen, it is unbusiness-like, for us to go on indefinitely, trusting to Providence and to two of his chosen agents. It is necessary that we should act as any other sensible body of business men would act, and put our affairs on a business basis. Therefore, the Board of Directors has considered the proposition that the constitution be amended to make this possible, and has, by unanimous vote, more than thirty members being present, recommended the adoption of the amendments to the constitution, which I shall now read:

1. Amend Art. IV, sec. 3, by inserting in the first line, after the word "association," the words "with the exception of the Secretary."

The effect of this, you will see, is to except the Secretary from the officers to be elected annually.

2. Amend Art. IV, sec. 3, by altering the second section so as to make it read: "The officers so chosen shall continue in office," etc.

The object here is to make it clear that the limitations imposed by the second section do not apply to the Secretary. These are mere verbal amendments, eliminating the Secretary from the elective officers as they exist at present, and leaving the matter open to be placed in other hands. Then the amended section would read:

> "The elective officers of the association, with the exception of the Secretary, shall be chosen by the active members of the association by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary to a choice. The officers so chosen shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided." (Art. IV, sec. 3.)

In providing for the election of the Secretary, who shall hold office at a compensation and for a term, it is necessary for us to protect his interests as well as our own. We do not care, I take it, to elect a Secretary who needs an office, or who at this moment would be glad to be sheltered beneath our constitutional protection. We desire to be free to go out and select the man who has demonstrated himself to be the best in the United States, if such can be found, and to ask him to come to us from any other form of educational work in which he may be engaged. To do this means that we must have him elected by a responsible and corporate body, one competent to make a contract, able, if necessary, to sue and be sued, and in control of the funds necessary to make the payment for his compensation. That is so plain a business proposition that I shall not extend my explanation of it any farther.

There exists in this association, within the whole range of its organization, but one such responsible body. The Board of Trustees is, by the constitution of the association and by law, the body corporate of the association. It keeps the seal, it holds the permanent funds, and it alone can make a contract. It alone can sue and be sued. No responsible man would surrender an income-producing position for an election by any other portion of this organization. The President, the Executive Committee, the Board of Directors, the association as here assembled, are all, in a legal sense, entirely irresponsible. That being the case, it follows as a matter of logical necessity and as a business proposition that the Secretary must be elected by the Board of Trustees. The Board of Trustees, as you remember, consists of five men, one of whom, the President of the association, serving for a year's term, is chosen from year to year by this body, on the action or recommendation of the nominating committee. The four elected trustees are chosen, each for the term of four years, one expiring each year, by the Board of Directors, which is chosen by this body on the recommendation of the nominating committee. It is my proposition, which has received the unanimous indorsement of the Board of Directors, that to this body corporate, so constituted, should be committed the task of selecting our Secretary and fixing his compensation and his term of office, providing the term shall not exceed four years.

One other point arises. The Secretary of the association is by existing constitutional provision a member of our Executive Committee. That committee consists of the President, the First Vice-President, the Secretary, the Treasurer, and the chairman of the Board of Trustees. These five men have important duties to perform during the year. Among other things, they virtually select, after the vote of recommendation by the Board of Directors has been had, the place of our next meeting, and they conclude in our behalf all of the difficult and often involved local arrangements. It was suggested in the meeting of the directors that it would probably not be wise to continue the paid Secretary of the association in that responsible position with a vote, while he was an employed officer. At the same time, it was fully understood there that, of course, the Executive Committee could not transact any business intelligently without his presence, his experience, and his skilled personal knowledge. Therefore it is provided in our proposed amendment that the Secretary of the association shall also be secretary of the Executive Committee. Another verbal amendment is suggested, striking his name out ot the Executive Committee as a voting member, and inserting a provision for a fifth officer to take his place, making the voting body uneven in order that there may not be a deadlock at any time. In other words, these ends are met by amending Art. IV by the addition of an entirely new section, to be numbered 11, and which will read:

> "Sec. 11. The Board of Trustees shall elect the Secretary of the association, who shall also be secretary of the Executive Committee, and shall fix his compensation and his term of office, for a period not to exceed four years."

As to the fifth member of the Executive Committee, there were two propositions before the Board of Directors. One was that the fifth man should be a representative of the Board of Directors elected annually by that board to serve for a single year. While that section, however, was under discussion, it was amended so as to constitute the Commissioner of Education, *ex officio*, the fifth member of the committee, and the amendment, as I hold it in my hand, passed in that form, and it is in that form that I now present it to you on behalf of the Board of Directors.

Now, gentlemen, I have taxed your patience sufficiently, but I believe in the fullest explanation of any important action that is to be taken, in order that no member of the association may feel afterward that he has been asked to vote upon any proposition without an opportunity being first given to understand it fully. If I have failed in any way to make this proposition perfectly clear, I wish to be given the privilege of answering any questions that any member of the association may desire to ask.

Before taking my seat, let me add a word. In my judgment this Secretary, at any compensation that we are likely to pay, will earn an income for this association. We have been appropriating for three years past a small sum to the Secretary to secure his services in the way that I stated; that sum, as you know from our records and reports, has been $1,500. We have also provided for the payment of $750 to the Treasurer for his services and clerical expenses. It will be possible — and this fact has come out in conference with the present Treasurer — if this amendment is adopted, to put upon the paid Secretary of the association all those matters of detail which have hitherto occupied, and to a certain extent embarrassed, the Treasurer, and leave him simply the bonded officer to hold our current funds and to issue checks against the same in payment of duly audited bills and drafts. We shall, therefore, cease to appropriate the $2,250 now appropriated for him and the Secretary, and the Secretary in return will bring into the association, by working along the lines that I indicated a few moments ago, an increasing annual income, which I am confident will make us better off, from a pecuniary standpoint, than ever before.

Mr. President, I have now said everything that it occurs to me to say in order to make this proposition clear. On behalf of the Board of Directors, I move that, after such discussion as members care to offer, this association do adopt and ratify these amendments to the constitution as they have been read, and that they do become part of the same.

The motion of Dr. Butler was seconded by Dr. F. Louis Soldan, of St. Louis, Mo.

Upon motion of A. S. Downing, of New York, it was ordered that the proposed amendments be acted upon separately.

Upon motion of Superintendent Aaron Gove, of Colorado, the first section of the proposed amendment was unanimously adopted as follows:

To amend Art. IV, sec. 3, of the constitution by inserting in the first line, after the word "association," the words, "with the exception of Secretary."

Upon motion of Mr. Gove, of Colorado, the second proposed amendment was unanimously adopted as follows:

Sec. 11. The Board of Trustees shall elect the Secretary of the association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of office for a period not to exceed four years.

The Secretary then read the third proposed amendment, to wit:

The President of the National Educational Association, the First Vice-President, the Treasurer, the chairman of the Board of Trustees, and the United States Commissioner of Education shall constitute the Executive Committee.

MR. COBB, of Massachusetts: I move to strike out the words "Commissioner of Education," and substitute therefor, "a representative to be chosen annually by the Board of Directors, which representative shall hold office for one year." We cannot tell who the future Commissioner of Education may be.

SUPERINTENDENT C. G. PEARSE, Omaha, Neb.: As a member of the Board of Directors who acted upon this matter, and after listening to many of the views of other directors, I desire to second the motion just made.

PRESIDENT A. R. TAYLOR, of Kansas: I hope that this proposed amendment will not prevail.

MR. PEARSE, of Nebraska: I trust that I am not misunderstood. No one has a higher respect for the United States Commissioner of Education than I, but I am in favor of this motion as a safeguard for the future.

Mr. A. S. Downing, of New York; Superintendent H. E. Dawes, of Nebraska, and Superintendent C. B. Gilbert, of New Jersey, spoke in favor of the pending motion.

PRESIDENT JOHN W. COOK, of Illinois: It does not seem to me this is a matter of such grave importance as some members think. In the first place, the Commissioner of Education will always be a man familiar with details with which we must have a great deal to do.

Mr. S. Y. Gillan, of Wisconsin, and T. Marcellus Marshall, of West Virginia, spoke in favor of the pending motion.

On a rising vote, the motion of Mr. Cobb was adopted by eighty-one in the affirmative and forty-one in the negative.

CHAIRMAN SKINNER: The question now recurs on the adoption of the amendments as a whole.

And thereupon the recommendations of the board as amended were unanimously adopted as follows:

Amend Art. IV, sec. 2, last paragraph, so as to read:

The President of the National Educational Association, the First Vice-President, the Treasurer, the chairman of the Board of Trustees, and a member of the association to be chosen annually by the Board of Directors, which member shall hold office for one year, shall constitute the Executive Committee.

Amend Art. IV, sec. 3, by inserting in the first line, after the word "association," the words, "with the exception of the Secretary."

Amend Art. IV, sec. 3, by altering the second sentence so as to make it read, "The officers so chosen shall continue in office," etc. The amended section would then read as follows:

> Sec. 3. The elective officers of the association, with the exception of the Secretary, shall be chosen by the active members of the associatian by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary to a choice. The officers so chosen shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

Further amend Art. IV by adding a new section, as follows:

> Sec. 11. The Board of Trustees shall elect the Secretary of the association, who shall also be secretary of the Executive Committee, and shall fix his compensation and his term of office for a period not to exceed four years.

Mr. William E. Sheldon, of Massachusetts, chairman of the Committee on Nominations, submitted the report of the committee as follows:

REPORT OF COMMITTEE ON NOMINATIONS

President	E. ORAM LYTE	Millersville, Pa.
Secretary	IRWIN SHEPARD	Winona, Minn.
Treasurer	I. C. McNEILL	West Superior, Wis.

VICE-PRESIDENTS

First Vice-President	James M. Greenwood	Kansas City, Mo.
Second Vice-President	W. W. Stetson	Auburn, Me.
Third Vice-President	E. B. Prettyman	Baltimore, Md.
Fourth Vice-President	H. C. White	Georgia
Fifth Vice-President	Joseph Swain	Bloomington, Ind.
Sixth Vice-President	J. R. Rightsell	Little Rock, Ark.
Seventh Vice-President	R. S. Bingham	Tacoma, Wash.
Eighth Vice-President	Frank P. Smith	Lawrence, Kan.
Ninth Vice-President	E. B. McElroy	Eugene, Ore.
Tenth Vice-President	McHenry Rhoads	Frankfort, Ky.
Eleventh Vice-President	J. Y. Joyner	Greensboro, N. C.
Twelfth Vice-President	S. N. Hopkins	Guthrie, Okla.

DIRECTORS

North Atlantic Division

Maine	John S. Locke	Saco
New Hampshire	Channing Folsom	Dover
Vermont	Mason S. Stone	Montpelier
Massachusetts	Will S. Monroe	Westfield
Rhode Island	H. S. Tarbell	Providence
Connecticut	F. E. Howard	Bridgeport
New York	A. S. Downing	Albany
New Jersey	James M. Green	Trenton

South Atlantic Division

Pennsylvania	George Howell	Scranton
Delaware	A. H. Berlin	Wilmington
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District of Columbia	W. B. Powell	Washington
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West Virginia	J. N. Deahl	West Liberty
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South Carolina	J. Frank Fooshe	Blackville
Florida	L. W. Buchholz	Tampa

South Central Division

Kentucky	W. H. Bartholomew	Louisville
Tennessee	W. R. Payne	Nashville
Georgia	W. F. Slaton	Atlanta

South Central Division — continued

Alabama	John T. Gregory	Mobile
Mississippi	E. E. Bass	Greenville
Louisiana	Warren Easton	New Orleans
Texas	O. H. Cooper	Carthage
Oklahoma	David R. Boyd	Norman
Arkansas	J. L. Holloway	Fort Smith

North Central Division

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Iowa	W. M. Beardshear	Ames
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Missouri	John R. Kirk	Jefferson City
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Montana	J. P. Hendricks	Butte
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Arizona	F. S. Hafford	Prescott
Oregon	J. H. Ackerman	Portland
Washington	O. C. Whitney	Tacoma
Utah	J. M. Tanner	Logan
California	E. E. Brown	Berkeley
Nevada	J. E. Stubbs	Reno
Idaho	J. C. Black	Albion

On motion, the Secretary of the association was instructed to cast the unanimous ballot of the association for the election of the officers designated in the report of the Committee on Nominations.

The Secretary announced that the ballot had been cast in accordance with the motion.

Whereupon the chairman announced that the officers named in the report of the Committee on Nominations had been duly and legally elected as officers of this association for the ensuing year.

The newly elected President, E. O. Lyte, of Pennsylvania, being called for, acknowledged the high compliment which had been paid to his state and to himself.

Superintendent A. G. Lane, of Illinois, chairman of the Board of Trustees: I was somewhat surprised, at the close of the meeting in Milwaukee, to read in some of the public school journals statements regarding the financial condition of the funds in the custody of the Board of Trustees. I made several full statements to the Board of Directors, and a complete statement has been published in the printed proceedings of the last two years, and will be printed in the proceedings of this meeting, giving the fullest possible information to the members of this association. Some question has been raised about some of the funds, notably the deferred payments of interest and principal; but all those were investments made before any of the present members of the Board of Trustees had to do with the funds. They were investments made in good faith at the Topeka meeting of 1886 and the Chicago meeting of 1887. The trustees are using due diligence to collect these amounts. If there are any members of the association who desire information in regard to the condition of the funds of which I am custodian as chairman of the Board of Trustees, I want to give it to them now on this floor.

No request for the information offered by Superintendent Lane was made.

There being no further business, the annual meeting of the active members of the association was adjourned *sine die*.

FOURTH DAY'S PROCEEDINGS

GRAND OPERA HOUSE.—MONDAY, JULY 11, 9:15 A. M.

The meeting was called to order by L. D. Harvey, Vice-President for Wisconsin.

Invocation by Rev. Samuel H. Green, of California Baptist Church.

Professor Josiah Royce, of Harvard University, Cambridge, Mass., delivered an address on the "Social Basis of Conscience."

Music—solo by Miss Eleanore Simonds, of Washington.

The subject of the morning was discussed by H. E. Kratz, superintendent of public schools, Sioux City, Ia.; George J. Ramsey, of Louisiana; Miss Marsh, of Michigan; Mr. F. B. Brandt, of Philadelphia; Mr. Ewing, of Ohio; Professor A. T. Ormond, of New Jersey; Mr. Rowe, of Connecticut; Mr. H. R. Sanford, of New York, and Mr. F. B. Dyer, of Ohio.

Professor Royce closed the discussion, and the convention adjourned to 8 P. M.

NEW NATIONAL THEATER.—MONDAY, JULY 11, 9:15 A. M.

Presiding, Professor J. N. Wilkinson, State Normal School, Emporia, Kan.

Prayer by Rev. J. Albert Johnson, African M. E. Church.

Address, "The Culture Value of the Higher Mathematics," Professor W. B. Smith Tulane University, New Orleans, La.

Music—contralto solo—Miss Eleanore Simonds.

The subject of the morning was discussed under the following heads:

"The Constants in Mathematics," Dr. Edward Brooks, superintendent of public schools, Philadelphia, Pa.

"Is the Science of Mathematics Qualitative as well as Quantitative?" Frank H. Hall superintendent State Institution for the Blind, Jacksonville, Ill.

"The Practical Value of the Study of Mental Arithmetic," A. S. Downing, supervisor of teachers' institutes and training classes, State Department of Public Instruction. Albany, N. Y.

"Educational Value of Geometry," Kelly Miller, professor of mathematics, Howard University.

GRAND OPERA HOUSE.—MONDAY, JULY 11, 8 P. M.

The meeting was called to order by Dr. Elmer E. Brown, of the University of California.

Dr. E. E. White, Cincinnati, O., addressed the association on "The Duty of the State in Education."

William E. Sheldon, of the Committee on Necrology, presented the report of that committee.

REPORT OF THE COMMITTEE ON NECROLOGY

The Committee on Necrology for 1898 begs leave to submit the accompanying report. Of twenty persons who have died since a report was made, we have not been able to obtain reliable information in regard to N. B. Thompson, of Kansas, whose membership began in 1895; L. A. Gray, of Maine, 1893; George R. Fowler, of Massachusetts, 1895, and Anna A. ummins, New York, 1896. Of the sixteen others we respectfully submit brief sketches, in order to pay a fitting tribute to their memory. That these sketches are not as complete and full as could be desired is owing to the fact that it seemed best to the committee to include in this year's report the names of all who have not heretofore been reported upon. This has made the list larger than usual, and has compelled the committee to make short and concise statements.

Respectfully submitted,

HENRY SABIN.
E. E. WHITE.
W. E. SHELDON.
A. R. TAYLOR.
E. C. HEWETT.

The report was, by general consent, not read, but was ordered filed and printed in the volume of proceedings.

Adjourned to 9:15 A. M., July 12.

NEW NATIONAL THEATER.—MONDAY, JULY 11, 8 P. M.

The meeting was called to order by Hon. John R. Kirk, of Missouri.

Dr. E. M. Gallaudet, president College for the Deaf, Washington, D. C., delivered an address on "The Deaf and Their Possibilities."

Cornet solo by Edwin S. Tracy, Washington, D. C.

Hon. John Eaton, ex-United States Commissioner of Education, Washington, D. C. spoke on "Education and Gold in Alaska."

The address of Mr. Eaton was translated, as delivered, into the sign language by Dr. Gallaudet, for the benefit of the deaf-mutes in the audience.

Rev. A. D. Mayo, of Washington, D. C., addressed the association on "Lessons from American Educational History."

Hon. N. C. Schaeffer, state superintendent of public instruction of Pennsylvania, spoke on "Man as the Symbol User."

Soprano solo by Miss Fannie At Lee, of Washington, D. C.

Adjourned to 9:15 A. M., July 12.

FIFTH DAY'S PROCEEDINGS

GRAND OPERA HOUSE.—TUESDAY, JULY 12, 9:30 A. M.

Meeting was called to order by Miss Margaret W. Sutherland, Vice-President for Ohio.

Rev. S. N. Brown, of Park Temple Congregational Church, invoked divine blessing,

Miss Sarah L. Arnold, supervisor of schools, Boston, Mass., addressed the association on "The Duties and Privileges of a Supervisor."

Miss Margaret J. Evans, Carleton College, Northfield, Minn., spoke on "Women's Clubs as an Educational Factor."

Miss Bettie A. Dutton, principal Kentucky Street School, Cleveland, O., spoke on "Woman as a Supervisor of Women."

Miss Sara J. Walters, State Normal School, Willimantic, Conn., addressed the association on "Teachers' Course of Study."

Miss Lillie A. Williams, of the State Normal School, Trenton, N. J., spoke on "The Teacher as a Traveler."

Announcements by the Secretary of the association.

The several subjects of the meeting were discussed by Miss Fruchte, of St. Louis. Mo., and Mr. Tracy B. Matthews, of Darlington, Md.

Hon. Alexander Hogg, of Texas, offered the following resolution, which was adopted:

> Appreciating every effort to give woman in her sphere every opportunity for advancement — to give her a fair chance with her brother, intellectually and socially; therefore be it
>
> *Resolved*, That the National Educational Association heartily indorses the movement lately set on foot to found and endow an institution of learning for the higher education of the daughters of the confederacy — lately undertaken by the patriotic and philanthropic citizens of Texas and other southern states.

Adjourned to meet at Convention Hall, 8 P. M., July 12.

NEW NATIONAL THEATER.—TUESDAY, JULY 12, 9:15 A. M.

Superintendent John E. McCahan, Vice-President for Maryland, presided.

Prayer by Rabbi L. Stern, Washington Hebrew Congregation.

The report of the Committee on Normal Schools was submitted by Z. X. Snyder, president State Normal School, Greeley, Colo., as follows:

Mr. Chairman : The committee appointed at the last session of the National Educational Association to investigate the subject of normal-school work has no formal report to make at this session. There are two reasons for this condition of affairs. First, on beginning the investigation, we found the subject was larger than we had anticipated, and we did not care to make a report that should not be thoro. Second, the appropriation for carrying on the investigation was not assured us until the meeting of the superintendents in February, and the time since then has been too short to admit of a complete investigation. We have, however, begun the work and shall be prepared to submit a formal report at the next annual meeting of the association.

The report was accepted and ordered filed.

Edwin P. Seaver, superintendent of public schools, Boston, Mass., addressed the association on "Democracy and Education."

Music by Miss A. B. Fisher.

Superintendent McHenry Rhoads, Frankfort, Ky.; Superintendent Richard Hardy, Ishpeming, Mich., and President Charles D. McIver, State Normal and Industrial College, Greensboro, N. C., discussed the subject of the morning.

Adjourned to meet in Convention Hall, 8 P. M., July 12.

CLOSING SESSION

CONVENTION HALL.—TUESDAY, JULY 12, 8 P. M.

President James M. Greenwood, of Missouri, called the convention to order.

Rev. Tennis S. Hamlin, Church of the Covenant, invoked divine blessing.

Music by the National Guard Brigade Band, of Washington.

The following were the speakers and subjects of the evening's program:

Superintendent J. F. Millspaugh, of Salt Lake City, Utah, "Sociology's Demand upon the Schools."

Superintendent C. G. Pearse, of Nebraska, "Between Day School and Reform School."

Principal G. N. Grisham of the Lincoln High School, Kansas City, Mo., "The Proper Education of an American Citizen."

Dr. A. E. Winship, editor of *New England Journal of Education*, Boston, Mass., "The School of the Future."

Principal James M. Milne, State Normal School, Oneonta, New York, "The Personality of the Teacher."

Dr. Elmer E. Brown, University of California, "The Larger University Idea."

Dr. Nicholas Murray Butler, of New York, chairman of the Committee on Resolutions, offered the following declaration of principles, which was unanimously adopted:

The National Educational Association, representing the teachers of the United States at this its thirty-seventh annual convention, makes the following declaration:

The integrity of our educational system can be threatened only by ignorance and by political corruption. A sound and intelligent public opinion must be in the future, as it has been in the past, the support of every movement to elevate the ideals and to strengthen the efficiency of our schools, public and private, higher and elementary, general and special. To labor unceasingly to produce such a public opinion is a main duty of the teaching profession, and to stimulate and instruct it a leading purpose of our professional gathering. We ask our fellow-citizens to give heed to the needs of our educational system, to protect and develop it, and particularly to guard it from damage thru parsimony and political chicane. The suffering and loss so inflicted fall not chiefly upon the teachers or upon the citizens themselves, but upon the nation's children, who are in due time to assume the responsibility for the preservation of our institutions. To limit their opportunities for a sound education is to strike a deadly blow at the republic itself.

We deplore and resent the tendency, manifest alike in cities and in rural districts, to treat the public-school service as political spoils, and to attack the reputation and professional standing of teachers and superintendents for political reasons alone. Political preferences and religious faith have no place in estimating professional efficiency, and we demand that the selection, promotion, and displacement of school officers and teachers be made on professional grounds alone.

We are glad to recognize that the schools exist solely for the education of the pupils, and not as a means of support for teachers; yet, because of the increasing demands made upon teachers, and the exacting character of their preparation and work, it is in the public interest that their compensation be so adjusted as to encourage them to make teaching a life work, and to secure recognition for long-continued service and efficiency.

We invite attention to the dangers to the public health that result from the contact of children in crowded schools, unless both the children and the community are protected from the spread of contagious diseases by constant medical inspection, and the skilled oversight of sanitary and hygienic conditions. It is the duty of every community, particularly of every large city, to make provision for such inspection and oversight. This policy is not only one of true economy, but also of enlightened self-interest.

The forward movement in education has our unwavering and enthusiastic support. Education is that social function by which the products of civilization are transmitted and enriched, and in this process the school plays a leading part. Insight into the forces that have shaped human development and the sympathetic study of the growing child are the mainsprings of its work. We urge upon teachers generally the appreciation of this fact, as well as the necessity for so shaping their studies and reading as to increase their knowledge in both of these directions.

The accepted division of the work of instruction into elementary, secondary, and higher is a convenient classification for administrative purposes, but it must not be allowed to conceal the fact that intellectual and moral development are constant and continuous, and that all education is essentially a unit. Every type or class of school is affected by the efficiency or the inefficiency of other schools associated with it in the educational system. The best interests of elementary education require association with, and support from, secondary and higher educational institutions that are freely open to the children of the people, in order that the standard of our civilization may be constantly raised by an increasing number of men and women trained for leadership.

We welcome every new step in the steadily advancing movement to increase the necessary qualifications of teachers. A high-school education, and at least one additional year's professional study of the history, principles, and practice of teaching, should be the minimum toward the establishment of which we should work.

We tender to the president and to the other officers of the government an expression of our sympathy and patriotic support in the unhappy contest in which our country is engaged. Much as war is to be deplored, the teachers of the United States recognize that the present struggle now being so triumphantly prosecuted has been entered upon in the most unselfish spirit, and from the loftiest motives. The cause of freedom and humanity is promoted, and the solidarity both of the American people and of the Anglo-Saxon race vastly increased, by an armed contest conducted in such a spirit, for such purposes, and with such determination and valor. The nation's great army of peace extends to the nation's soldiers and sailors its congratulations and its grateful appreciation for the manifestation of the high qualities of courage and of skill that have won so brilliant a succession of victories for the American arms, both on land and on sea.

Dr. Nicholas Murray Butler, in behalf of the Committee on Resolutions, offered the following resolution, which was unanimously adopted:

Resolved, That the thanks of the National Educational Association are due, and are hereby most cordially tendered, to all individuals and organizations which have contributed so largely to the size, comfort, and convenience of this meeting. We may in particular express our obligations to Colonel Henry F. Blount, president of the General Committee; to President B. L. Whitman, D.D., chairman of the Executive Committee; to William B. Powell, A.M., superintendent of schools, and to the several chairmen and members of the various subcommittees, the fruit of whose abundant labors has been so manifest on every side.

To the citizens of Washington for their cordial welcome; to the newspapers of the city for their full and

accurate reports of our proceedings; to the railroads and transportation companies for their generous and cordial co-operation, and to Messrs. Wyckoff, Seamans & Benedict, proprietors of the Remington Standard Typewriter, for generous and efficient service to executive officers and members of the association, we are under obligations that we most cordially recognize.

DR. BUTLER: I am instructed by the Committee on Resolutions to ask you, Mr. Secretary, to put this motion:

***Resolved*, That we tender our retiring President, Dr. James M. Greenwood, this expression of our affection and respect, and our high sense of appreciation of his services to education and to this association.**

The Secretary put the motion of Dr. Butler, and the resolution was unanimously adopted.

PRESIDENT GREENWOOD:

Ladies and Gentlemen: It becomes my duty at this moment to return to you the charge as President of the National Educational Association of the United States which you intrusted to me a year ago. To you, President Lyte, I will say that I trust, during the coming year, the duties of your office will fall upon you as pleasantly as they have fallen upon me. I am sure that you appreciate the responsibility you are about to assume. I trust the members of the association will give you their generous support, as they have given it to me. I trust you will have as good fortune in the selection of the place of meeting and of a local committee in the coming year as I have had in the past. I do not know of an occasion in the history of this association when the general program, as well as the programs of the various departments, have been as perfect in every respect as they have been here in this beautiful city, the capital of our country. It is no small incentive to remember that there is no such organization in the world as the one that I now turn over to your hands. I trust the year will be a successful one to you as the President-elect of the National Educational Association.

President Lyte responded as follows:

I appreciate very highly the honor that has been conferred upon me. I appreciate also the responsibilities devolving upon anyone who assumes even a part of the direction of this association, and I promise you here and now to perform my duties to the best of my knowledge and ability. It must be remembered, however, that the highest degree of success can be achieved only by hearty co-operation of all of the officers and members; and I trust we shall have your co-operation, in order that the next meeting may be a fit successor to the great meeting just closing in this beautiful city, where we have been considering great questions concerning the molding of the educational thought of this country; where we have, in some degree at least, determined the educational policy of this, the greatest nation in the world — in the language of Dr. Winship, "this imperial republic," a nation without a peer in the intelligence and valor of its sons, and in the virtue and nobility of character of its daughters.

It is especially appropriate at this time when the boys of the sunny South laugh at being called "Yankees;" when the boys from the North fall in line and march to the tune of "Dixie;" when the teachers from the North, South, East, and West are all engaged in rubbing out "Mason and Dixon's line;" when in this country there is no North, no South, no East, no West, but a united land — it is especially appropriate that this great body should adjourn with the national hymn, "My Country, 'Tis of Thee."

We shall ask the band, therefore, to lead us in that hymn, after which we shall be dismissed with benediction by Rev. Dr. Whitman, of Columbian University.

The audience arose and sang "America," with accompaniment by the National Guard Brigade Band. Dr. Whitman pronounced a benediction, and the thirty-seventh annual meeting of the National Educational Association was declared adjourned *sine die.*

IRWIN SHEPARD, *Secretary.*

JAMES M. GREENWOOD, *President.*

MINUTES OF THE MEETINGS OF THE BOARD OF DIRECTORS FOR 1897–98

COSMOS CLUB. — THURSDAY, JULY 7, 3 P. M.

The Board of Directors of the National Educational Association was called to order by President J. M. Greenwood in the assembly hall of the Cosmos Club, Washington, D. C., at 3 P. M., Thursday, July 7, 1898.

On the call of the roll by the Secretary, the following named directors responded:

James M. Greenwood, Missouri; Nicholas Murray Butler, New York; W. R. Garrett, Tennessee; I. C. McNeill, Wisconsin; Albert G. Lane, Illinois; Charles R. Skinner, New York; Newton C. Dougherty, Illinois; Aaron Gove, Colorado; W. T. Harris, Washington, D. C.; Albert P. Marble, New York; Charles I. Parker, Illinois; A. R. Taylor, Kansas; John S. Locke, Maine; A. S. Downing, New York; S. T. Skidmore, Pennsylvania; W. B. Powell, District of Columbia; Mae E. Schreiber, Wisconsin; John R. Kirk, Missouri; A. H. Avery, South Dakota; John MacDonald, Kansas; R. S. Bingham, Washington; W. E. Sheldon, Massachusetts; J. Ormond Wilson, District of Columbia; F. E. Howard, Connecticut; James M. Green, New Jersey; A. H. Berlin, Delaware; W. H. Anderson, West Virginia; W. M. Beardshear, Iowa; W. S. Stockwell, North Dakota; C. G. Pearse, Nebraska; L. C. Greenlee, Colorado; F. Louis Soldan, Missouri; Irwin Shepard, Minnesota. Present, thirty-two.

On motion of Director Dougherty, of Illinois, the reading of the minutes of the last meeting of the board was dispensed with, and the minutes as printed in the volume of proceedings for 1897 were approved as printed.

Treasurer I. C. McNeill presented his report, and explained in detail the various items thereof.

On motion of Director Skinner, the report of the Treasurer was received, approved, and ordered printed in the volume of proceedings for 1898; and the thanks of the Board of Directors were tendered to the Treasurer for his fidelity to the interests of the association.

In response to an inquiry by Director MacDonald, the Secretary explained that the enhanced cost of publishing the bound volume of proceedings was due to an increase in the amount of matter which became necessary from year to year, owing to the addition of new departments, and also to the larger editions demanded to meet the steady annual increase in the number of calls for the volume.

On motion of Mr. Vaile, the Board of Directors, after full discussion, concurred in the action of the committee of the Department of Superintendence, and approved the adoption of the following amended spellings for use in the proceedings of that department, as follows:

Program (programme), tho (though), altho (although), thoro (thorough), thorofare (thoroughfare), thru (through), thruout (throughout), catalog (catalogue), prolog (prologue), decalog (decalogue), demagog (demagogue), pedagog (pedagogue).

On motion of Director Kirk, of Missouri, the following resolution was adopted:

Resolved, That in publishing the proceedings of this and other meetings of the National Educational Association, until it is otherwise ordered, the Secretary be directed to use the simplified spellings recommended by the committee appointed at the Indianapolis meeting of the Department of Superintendence.

Director Lane, chairman of the Board of Trustees, submitted the annual report of the Board of Trustees and explained the several items thereof; which, after discussion by the directors, was received, approved, and ordered printed in the volume of proceedings for 1898.

Director Nicholas Murray Butler presented certain proposed amendments to the constitution of the association, which, after discussion and amendment, were unanimously concurred in and recommended to the general association for adoption.

The proposed amendments, as recommended by the Board of Directors, were as follows:

Amend Art. IV, sec. 2, last paragraph, so as to read:

The President of the National Educational Association, the First Vice-President, the Treasurer, the chairman of the Board of Trustees, and the United States Commissioner of Education shall constitute the Executive Committee.

Amend Art. IV, sec. 3, by inserting in the first line, after the word "association," the words "with the exception of the Secretary."

Amend Art. IV, sec. 3, by altering the second sentence so as to make it read, "The officers so chosen shall continue in office," etc. The amended section would then read as follows:

Sec. 3. The elective officers of the association, with the exception of the Secretary, shall be chosen by the active members of the association by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary to a choice. The officers so chosen shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

Further amend Art. IV by adding a new section, as follows:

Sec. 11. The Board of Trustees shall elect the Secretary of the association, who shall also be secretary of the Executive Committee, and shall fix his compensation and his term of office for a period not to exceed four years.

On motion of Director Butler, the following distinguished educators were unanimously elected as corresponding members of this association; and the Secretary of the association was instructed to have prepared suitably engrossed certificates of membership, to be signed by the United States Commissioner of Education, the President and Secretary of the association, and transmitted to the respective corresponding members:

MISS DOROTHEA BEALE, principal of Ladies' College, Cheltenham, London, England.

SIGNOR LUIGI BODIO, direttore generale della Statistica del Regno, Roma, Italia.

PROFESSOR FERDINAND BUISSON, professor of education at the Sorbonne, Paris, France.

GABRIEL COMPAYRÉ, rector of the University at Lyons, France.

SIR JOSHUA G. FITCH, LL.D., formerly her majesty's inspector of training colleges and lecturer on education at the University of Cambridge, 13 Leinster square, Bayswater, W., London, England.

S. S. LAURIE, LL.D., professor of the history and institutes of education in the University of Edinburgh, Scotland.

DR. E. LEVASSEUR, professor at the College of France, president of the Statistical Commission for Primary Instruction.

FRIEDRICH PAULSEN, PH.D., professor of philosophy and education in the University of Berlin, Germany.

MICHAEL SADLER, A.M., director of special inquiries and reports, Department of Education, Whitehall, S. W., London, England.

HON. E. LYULPH STANLEY, member of the London school board.

All business having been completed, the board adjourned.

IRWIN SHEPARD, *Secretary.*

JAMES M. GREENWOOD, *President.*

MINUTES OF A MEETING OF THE BOARD OF DIRECTORS FOR 1898–99.

COSMOS CLUB.—SATURDAY, JULY 9, 3 P. M.

The board was called to order by President-elect E. Oram Lyte in the assembly hall of the Cosmos Club, Washington, D. C., at 3 P. M., Saturday, July 9, 1898.

On the call of the roll by the Secretary, the following named directors responded:

Nicholas Murray Butler, New York; James M. Greenwood, Missouri; Newton C. Dougherty, Illinois; George T. Fairchild, Kentucky; W. R. Garrett, Tennessee; Aaron Gove, Colorado; Albert G. Lane, Illinois; Albert P. Marble, New York; Marcellus T. Marshall, West Virginia; W. E. Sheldon, Massachusetts; Charles R. Skinner, New York; F. Louis Soldan, Missouri; J. Ormond Wilson, District of Columbia; E. Oram Lyte, Pennsylvania; I. C. McNeill, Wisconsin; Will S. Monroe, Massachusetts; A. S. Downing, New York; James M. Green, New Jersey; George Howell, Pennsylvania; A. H. Berlin, Delaware; John D. Worthington, Maryland; W. B. Powell, District of Columbia; William F. Fox, Virginia; G. A. Grimsley, North Carolina; John T. Gregory, Alabama; J. L. Holloway, Arkansas; D. K. Goss, Indiana; H. R. Pattengill, Michigan; L. D. Harvey, Wisconsin; W. M. Beardshear, Iowa; George B. Aiton, Minnesota; Frank Crane, South Dakota; J. E. Hendricks, Montana; Miss Estelle Reel, Wyoming; F. S. Hafford, Arizona; J. H. Ackerman, Oregon; J. E. Stubbs, Nevada; J. C. Black, Idaho. Present, thirty-eight.

The minutes of the last meeting of the board were read and approved.

The President announced the first business of the meeting to be the election of a member of the Board of Trustees to succeed Dr. Nicholas Murray Butler, of New York.

Director Lane, of Illinois, nominated Dr. Butler, of New York, to succeed himself as a member of the Board of Trustees of the association.

There being no other nominations, the Secretary, under instruction of the board, cast the unanimous ballot for Dr. Butler, and he was declared duly and legally elected as a member of the Board of Trustees for the term of four years.

President Lyte appointed the following committee to consider names suggested by the board to fill existing vacancies in the National Council of Education:

Director James M. Green, New Jersey.
Director A. R. Taylor, Kansas.
Director A. P. Marble, New York.

The committee retired and subsequently submitted the following recommendations for election to the National Council, the term of each to expire in 1904:

Richard G. Boone, Ypsilanti, Mich., to succeed himself.
F. Louis Soldan, St. Louis, Mo., to succeed himself.
James H. Canfield, Columbus, O., to succeed himself.
Frank Rigler, Portland, Ore., to succeed Joseph H. Baldwin, of Texas.
L. D. Harvey, Milwaukee, Wis., to succeed Walter L. Hervey, of New York.

On motion of Director N. C. Dougherty, the report was accepted and adopted, and the gentlemen named in the report of the committee were declared duly and legally elected as members of the National Council for the ensuing six years.

President Lyte called for nominations to fill one vacancy in the Executive Committee, in accordance with the recently adopted amendment to the constitution.

The names of Director William T. Harris and Director C. G. Pearse were placed in nomination for election as member of the Executive Committee.

Ballots were cast with the following result:

For William T. Harris	20
For C. G. Pearse	11

Whereupon William T. Harris was declared duly and legally elected as a member of the Executive Committee of this association for the period of one year.

S. Y. Gillan presented to the directors a communication from the Educational Press Association concerning the publication of the program and official notices from the officers of the association, which was freely discussed.

On motion of Director Butler, it was unanimously resolved that the Board of Directors take no action on the subject-matter of Mr. Gillan's communication.

Director L. D. Harvey, of Wisconsin, offered the following resolution:

Resolved, That the sum of $500 be appropriated by the Board of Directors from the funds of the National Educational Association to be used by the Library Department of the National Educational Association in investigating the relations of the public schools and public libraries, and in the preparation and dissemination of a report upon said relations; said fund to be available for use by said department during the year 1898–99.

At the request of Director James H. Baker, of Colorado, Director Harvey yielded the floor.

Director Baker thereupon read the following communication:

The National Council of Education, at its executive session on July 7, appointed the undersigned to present to the Board of Directors of the National Educational Association the following resolution:

Resolved, That the president of the Council be instructed to associate with himself two other members, the three to constitute a committee that shall seek from the Board of Directors of the National Educational Association favorable action on the following propositions:

1. That the said board refer all propositions relating to educational investigations that call for the expenditure of the funds of the association to the Council for its consideration and advice, and that the board refuse to take final action in such cases until the Council has expressed its judgment. Furthermore, that all investigations for which such funds are appropriated shall be conducted under the direction of the Council.

2. That the said board appropriate $250 for the coming year to enable the Council to carry on its work.

CHARLES DE GARMO, *President of Council.*
B. A. HINSDALE.
JAMES H. BAKER.

Director Baker moved the adoption of the resolution read, which motion was duly seconded and, after some discussion, adopted.

At this point Director Harvey renewed his motion appropriating $500 to the Library Department, which motion was duly seconded. After discussion, the matter was referred to the National Council of Education for consideration and recommendation, in accordance with the resolution previously adopted.

Director F. Louis Soldan, of St. Louis, presented a resolution concerning preparations for an educational exhibit at the Paris exposition in 1900, which, on motion of Director A. S. Downing, of New York, was laid upon the table until the next meeting of the board.

On motion, the Board of Directors adjourned to meet at the Cosmos Club at 2 P. M., July 11, 1898.

COSMOS CLUB.—MONDAY, JULY 11, 2 P. M.

The adjourned meeting of the Board of Directors was called to order by President E. Oram Lyte, of Pennsylvania.

On the call of the roll by the Secretary, the following directors responded:

Nicholas Murray Butler, New York; W. R Garrett, Tennessee; Aaron Gove, Colorado; T. Marcellus Marshall, West Virginia; Charles R. Skinner, New York; J. Ormond Wilson, District of Columbia; A. S. Downing, New York; James M. Green, New Jersey; John D. Worthington, Maryland; J. N. Deahl, West Virginia; D. K. Goss, Indiana; L. D. Harvey, Wisconsin; George B. Aiton, Minnesota; John R. Kirk, Missouri; W. L. Stockwell, North Dakota; C. G. Pearse, Nebraska; Frank R. Dyer, Kansas; J. B. Hendricks, Montana; L. C. Greenlee, Colorado; Mrs. E. R. Jackson, New Mexico; F. S. Hafford, Arizona; J. H. Ackerman, Oregon; O. C. Whitney, Washington; J. M. Tanner, Utah; E. E. Brown, California; W. A. Caldwell, Indian Territory. Present, twenty-six.

The Secretary announced the receipt of a letter of resignation from Director F. B. Dyer, of Ohio, and, on motion, Mr. C. W. Bennett, of Ohio, was elected as a director, vice F. B. Dyer, resigned.

The Secretary also read a letter from Mr. Hand, stating that Mr. J. F. Brown, elected as a director for South Carolina, could not serve; and, on recommendation of Mr. Hand, Mr. J. Frank Fooshe, of Blackville, S. C., was elected a director, vice Brown, resigned.

Director Dougherty, of Illinois, called from the table the resolution of F. Louis Soldan, of Missouri, offered at the meeting of July 9, and the resolution was unanimously adopted, as follows:

Resolved, That the Board of Directors appoint a general committee, whose duty it shall be to promote in suitable ways the preparation of an exhibit of education, showing its condition and progress within the United States; said committee to be formed in such a way as to represent all educational interests and admit of easy division into subcommittees for special work; such committee to consist of ten state superintendents, ten city superintendents, ten presidents of colleges or universities and normal schools, ten representatives of private or denominational schools, five librarians of public libraries, and five representatives of public institutions for the education of special classes, including asylums for orphans, the deaf and dumb, the blind, and also state reform schools; said committee to be appointed by the Board of Directors of the National Educational Association, and to meet in November upon the call of the President of the National Educational Association.

On motion of Director Dougherty, the President appointed the following committee, to whom the resolution of Director Soldan and all matters pertaining thereto were referred, with power to act:

Director William T. Harris, chairman; the President of the association; Director N. C. Dougherty, of Illinois; Director C. G. Pearse, of Nebraska, and Director James M. Green, of New Jersey.

Director Sheldon made an informal report from the National Council to the effect that the application of the Library Department for the appointment of a committee and an appropriation of $500, in accordance with the resolution of Director Harvey, of Wisconsin, offered at the meeting of the directors held July 9, had been duly considered; that the Council had voted to authorize the president of the Council to appoint the desired committee and had further voted to recommend that the Board of Directors grant an appropriation of $500 for the expenses of this committee.

A motion was made and seconded that the appropriation recommended by the Council be granted.

Director E. E. White requested information as to the amounts already appropriated for similar work now in progress.

Director A. G. Lane, chairman of the Board of Trustees, reported the following authorized appropriations:

For the Secondary Department	$500
For the Normal Department	500
For the National Council	250
Requested for the Library Department	500
	$1,750

After brief discussion, the motion was unanimously carried.

Director L. D. Harvey, at the request of the Wisconsin delegation of active members, offered the following resolution, which was ordered to lie over for one year under the rule:

Resolved, That the Board of Directors recommend to the general association that the constitution be amended as follows:

Amend Art. III — Membership — by striking out sec. 3 and substituting therefor the following:

"Any associated member eligible for active membership may become an active member upon the payment of the annual dues for the current year."

The board received invitations to hold the next anuual meeting of the association in Los Angeles, Cal.; Salt Lake City, Utah; Portland, Ore.; and Tacoma, Wash.

Representatives from each locality were allowed a limited time for presenting the advantages of their respective cities.

The result of an informal ballot on choice of place for the next meeting was as follows:

	1st choice	2d choice	3d choice
Los Angeles, Cal.	20	9	6
Salt Lake City, Utah	12	11	14
Portland, Ore.	8	14	12
Tacoma, Wash.	3	4	3

On motion, the entire subject of place for holding the next convention was referred to the Executive Committee, with power to act.

Mr. D. W. Springer, of Ann Arbor, invited the association to meet at Detroit in 1900.

Director William E. Sheldon, of Massachusetts, of the Committee on Necrology, stated that Henry Sabin, of Iowa, chairman of the committee, had forwarded the report to him, with the request that it be presented to the Board of Directors, and finally to the association, and Mr. Sheldon moved that, when this report is presented to the association, it be given in abstract by the committee, and that the report be printed in full in the volume of proceedings of this convention. Seconded; carried.

On motion, the Board of Directors adjourned *sine die*.

IRWIN SHEPARD,
Secretary.

E. ORAM LYTE,
President.

GENERAL SESSIONS OF THE ASSOCIATION

ADDRESSES OF WELCOME

HON. JOHN W. ROSS, MEMBER OF BOARD OF COMMISSIONERS, WASHINGTON, D. C.

Within a decade the people of the District of Columbia have welcomed and entertained such distinguished assemblages as the Grand Encampment of Knights Templar of the United States, the Grand Army of the Republic, the Knights of Pythias, the Christian Endeavor Association of the United States, and many other national organizations. But no event of recent years has excited a more general interest or aroused a more genuine enthusiasm among our people than does the meeting of this great convention.

For the first time in its long and honorable history, the National Educational Association comes to the federal capital. During many months past the people of Washington have been preparing for your reception. Our citizens, prominent and influential as educators and in the business world, have cheerfully given time and attention from their own pressing business engagements, in order to make your entertainment worthy of the national capital and in keeping with the dignity of the cause you represent.

There is no community in all the land where the public school is more highly regarded than in your capital city. You are, doubtless, aware of the fact that no public money can be used in the District of Columbia, for any municipal purpose, which has not been specifically appropriated therefor by an act of Congress. But the Congress, in response to an overwhelming public sentiment, has provided for the 44,000 children enrolled in our public schools a corps of 1,143 teachers, and has increased the number of school buildings owned by the district to 117.

For many years a special feature of our school system has been its instruction in manual training. This system has been so successfully taught under adverse circumstances that the Congress, at the session now closing, has authorized the erection and equipment of a building to be used solely for manual training purposes, to cost $125,000. Whatever of efficiency has marked the methods in vogue in this district may be justly attributed to the wise liberality of Congress in making appropriations for the schools; to an able, non-partisan school board; to faithful and efficient superintendence; and, last but not least, to the impartial enforcement of the merit system in the appointment, the retention, and the promotion of teachers.

We all recognize the truth that the art of teaching is susceptible of unlimited growth and advancement; that the teacher can and should be constantly taught new and better methods of instruction; and that, therefore, such a conference as that now about to begin, involving an interchange of experiences and observations by the able minds here assembled, must be of incalculable value to all who are privileged to be present and to take a part in your discussions. In many respects your convention will be one of the strongest incentives to intellectual growth and activity incident to these closing years of the nineteenth century. As educators you are endowed with the great privilege and charged with the vast responsibility of training the minds and molding the characters of the future citizens of a republic which seems destined to enact a new and untried rôle upon the stage of national achievement. You assemble at the only period in our history when the boys of our homes and of our hearts have carried the flag, under whose protection they were trained in our schools, into distant foreign lands. Within a few short weeks their valor and their heroism have changed the current of human events, and have given to the young republic of the West a new place among the nations of the world. They have won victories, not alone by reason of the justice of the cause for which they fought; not alone by reason of the fact that they come of a stock not accustomed to defeat; but, also, because they have been trained and disciplined as American freemen in American schools. And if, as now seems inevitable, it is a manifest destiny that our flag shall not be hauled down in the foreign lands where it has been planted, our people will require new lessons in statecraft and new instruction as to the duties which will devolve upon them in their changed relations with the world's great powers. Heretofore we have taken lessons only in the art of governing ourselves. Another kind of knowledge will now be required in dealing with the people who dwell in the islands of the sea.

And so, day by day and hour by hour, your responsibilities, educators of America, are broadening and deepening. In your care and keeping are the future presidents, legislators, judicial officers, and diplomatic representatives of the United States. It follows that, in the whole line of human avocations, there is not one more useful, more influential, or more honorable than that one to which you have devoted your lives.

The entire people of the District of Columbia extends to you a heartfelt greeting. May your sojourn in the capital city be to yourselves personally, and to the cause which you represent, fruitful of good results; and may you carry with you to your homes and to your various fields of labor renewed love for and devotion to the government of the United States.

B. L. WHITMAN, D.D., PRESIDENT COLUMBIAN UNIVERSITY, CHAIRMAN OF LOCAL EXECUTIVE COMMITTEE, N. E. A., WASHINGTON, D. C.

This is a happy hour for Washington. You will hardly take it amiss if we tell you over and over that you make us happy. Who of us does not sympathize with George Eliot when she says: "I like not only to be loved, but to be told that I am loved. The realm of silence is large enough beyond the grave"? Our honored commissioner has already assured you that you are welcome. But one does not quickly tire of being assured that one is welcome, and it is my glad privilege to repeat the word. The nation's teachers are welcome in the nation's capital.

The place, the hour, and the man are well met in this convention.

By the place I mean Washington. It is the home of the nation. The heart of the patriot thrills at the word. Wherever his citizenship may be, his home as a patriot is here. Because he is a patriot, he will give himself without stint to the municipal and state obligations that rest upon him as a citizen, but he will never forget that the shrine of his devotion and the embodiment of his hopes lie here. There is scarcely a state in the union that has not placed its mark upon the city somewhere—Massachusetts avenue, New York avenue, Pennsylvania, North Carolina, South Carolina, Florida, Wyoming, California avenues, and others by the score. As you walk about, you will find yourselves on familiar ground. It will be hard to find in the city a spot of purely local interest. Upon the same street you will find the homes of citizens from the four quarters of the country. The parks record national history — Dupont and Scott and Thomas and McPherson and Farragut and Lafayette. The buildings, houses, are not local, but national, enterprises. The tides of interest are not local, but national. Your coming does not increase the number of the elements of which our city's life is composed — every day in the year the states from which you come are represented here. Your numbers simply make the representation more adequate. As you exchange greetings, you illustrate the fellowship of the states in their common center, forgetting time and space and difference. By the map it is forty miles from Washington to Baltimore, and 3,200 from Washington to San Francisco. Sympathetically it is no farther to the Pacific slope than to our sister city, for in both East and West love of country creates kinship which ignores geographical boundaries and makes citizenship a bond of brotherhood under which the interest of each becomes the interest of all. The story of the imperishable things in our national history is recorded here. One bares the head and walks softly in presence of them. Typical of them all is the sacred memory awakened by the city's name, repeated by the shaft that watches by the river he so loved and by whose peaceful waters he now sleeps, pledging the brotherliness of all citizens for all time by the name a nation's devotion gave him — the Father of his Country.

By the hour I mean the present.

"We are living, we are dwelling,
In a grand and awful time,
In an age on ages telling,
To be living is sublime."

Behind the flare of rockets and the small boy's din, last Monday, was a spirit seen by no Fourth of July since the nation began to be. Events of the last few weeks have been recording themselves upon the pages of history. More yet, they have been weaving themselves into the warp and woof of a nation's life. Great as they seem to us, it may be questioned whether we appreciate their greatness. We are still too near them to get their proportion. Their greatest significance lies in the development of national spirit. Our country is more completely one, today, than ever before. That means that we are more a nation, today, than ever before. No nation can be strong which reads its history by sections. No nation can be strong that presents too clearly recognizable types. Deplore it as we may that war is in the air, and that blood must be shed — we cannot close our eyes to the fact that, in its latest undertaking, it is the whole nation that has set its hand to the work. It is not a month since I heard South Carolina men talking about being called Yankees by the Spaniards, and actually glorying in the name. "Dixie" stirs the people today to as wild enthusiasm in Boston as in Richmond. And in every hamlet, by every fireside, grizzled veterans and little children sing the national hymn, as it was never sung before.

"My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died,
Land of the pilgrim's pride.
From every mountain side
Let freedom ring."

And that is the best of it all. Our nation has been discovering itself by the larger discovery of its mission and destiny. Liberty under law is its central idea. For a hundred years we have been at work on that idea. At last it seems to be coming clear. Then only is a man free when he is able to discharge his duty as a man — no bondage without making him physically a tool, and no bondage within making him spiritually a slave. It is with a nation as it is with a man. Independence of external domination and mental and moral self-control alone mark a nation as free. But such freedom destines a nation to be a leader in the world's life. The life of a free man is a call to men everywhere to be free. The life of a free people is a call to peoples everywhere to be free. When the feet of our fathers pressed Plymouth rock, a beacon was raised that ever since has blazed for the whole world. Ever since that moment the echo of the bells of San Blas has been bearing its message of the new dawn:

"Out of the shadows of night
The world rolls into light;
It is daybreak everywhere."

That is the secret of the present march of events. That is the meaning of Manila and Santiago. We are mistaken if we suppose that we have gone to war to feed and clothe a handful of sufferers in Cuba and the Philippines. We are mistaken if we think that all we desire is to whip Spain. Back of Spain is the power we fight — ignorance and cruelty and defiance to human rights. Back of Cuba and the Philippines are the things for which we strive — liberty for body and soul, truth, and hope for the downtrodden heart of man. The spectacle of unselfish effort for others is so new to political vision that the world does not understand it yet. We scarcely understand it ourselves. Where it will end we cannot yet see clearly. But the hands and minds and hearts which guide our destinies are the hands and minds and hearts of men brave and wise and true. Congress has shown itself worthy of the confidence of the country. A gentleman, a soldier, a statesman, a Christian represents the nation in the White House. Never before in a hundred years have we so nearly realized the immortal words of the farewell address: "Let us raise a standard to which the wise and honest may repair. The event is in the hands of God." The heart of the patriot leaps at the thought that it is precisely the raising of that standard that has given us, in these closing years of the century, the realization of the vision cherished thru all the years — a land unbroken by discord or sectional interest; no North, no South, no East, no West; one country, one flag, beneath which the citizen may be proud to stand in the presence of the whole world and say: "I am an American."

By the man I mean the teacher. In a republic the influence represented by the teacher is, to the last degree, important. Here personality supersedes authority. More than we think, the personal touch is shaping the life of our nation. The more a nation controls by intelligence and moral weight, the more important are its schools. It is a lesson we have been slow to learn, but we are learning it rapidly in these days, that a nation's greatness lies, not in things, but in men. We need not have been so long in learning it, for our history is full of it. The strength of New Hampshire is not her granite hills, but Webster. Vermont is greatest, not by her green mountains, but by Dewey. Massachusetts takes pride, not so much in her manufactures as in Winthrop and the Adamses and Horace Mann. Pennsylvania is rich, not so much by her oil as by Penn and Franklin. Virginia boasts, not so much her tobacco plantations as Patrick Henry and Thomas Jefferson. South Carolina boasts, not her rice fields, but Calhoun. Kentucky's pride is not so much in her blue grass and blooded horses and whisky as in Justice Harlan and Henry Clay. Ohio, if asked to name her most precious possessions, would name, not her gas wells, her rolling mills, her wool, but Hayes and Garfield and McKinley. And when the account of American greatness is made up in the days to come, the pride of the American citizen will rise most, not at the record of boundless territory, teeming population, and uncounted wealth, but at the names that are engraved beyond effacement on the crown of American glory — Grant and Lincoln and Washington.

If this means anything, it means that we are face to face with the greatest opportunity teachers ever had. The world has discovered that its riches lie, not in material resource, but in life. Material good is good only as it contributes to life. To sound this note until the whole range of human experience answers back to it is our first task. It is all-important that we get the conception clearly ourselves. We are forever in danger of falling into the error of supposing that educational progress consists solely or mainly in the perfecting of material appliances. It is to be sought rather in improvement of teacher and teaching power. This will particularly appear in larger knowledge of life and acquaintance with its laws — sympathy, insight, skill, tact, adaptability. Our second task is the privilege of securing to common life its heritage. The achievements of genius illumine every page of our history. Such achievements will never be lacking. The pinnacles of fame will never remain long unoccupied. The world is only too glad to accord its meed of praise to Dewey and Merritt and Sampson and Schley and Hobson and Miles and Shafter and Joe Wheeler and Fitzhugh Lee. This is well. But there is merit that never gets into government reports or newspaper dispatches. There are heroes who are never promoted. We must not forget the value of the commonplace. Let us be true to unheralded worth! Let us honor the heroes of the picket and of the stoke hole!

Not only so. Our country needs just now emphasis laid upon the fact that patriotism is not confined to carrying a sword. "Peace hath her victories not less renowned than those of war." The peaceful walks of life need to be trod patriotically. There is a patriotism of the counting-house, the factory, the farm, the church, the fireside. To be loyal to the principles of sound government; to be faithful to the demands of citizenship; to be honest in the discharge of social obligations; to be clean and pure and true — that is patriotism. Teach that to every scholar, from the kindergarten to the school of philosophy. Out from the schoolroom it will find its way up and down the land. The millionaire will learn it and will administer his wealth as a patriot. The statesman will learn it and will discharge his office as a patriot. The plow boy will learn it and will turn his furrow as a patriot. Fatherhood will learn it and will count it joy to be proved worthy of so holy a task. Motherhood will learn it and will teach the lips that lisp their evening prayer to frame the name of their country, making of their country and themselves a daily offering to God. So the boyhood and girlhood of today, which your faithful work is preparing for the larger tasks of tomorrow, will offer to the world the manhood and womanhood that make the strength of nations, and furnish the largest guarantee that our faith in our institutions is not misplaced.

W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION, WASHINGTON, D. C.

It is fitting that you hold this annual session at the capital of the nation. You meet here at an important epoch in the history of the country. The annual census of the United States in 1880 showed for the first time an aggregate of over fifty millions of inhabitants. It was a true remark, then made by one of us in a session of the Department of Superintendence, that America had now, for the first time, ascended above the horizon of Europe. We had become visible to Great Britain and its peers on the continent as a nation of equal rank, and to be taken account of in future adjustments of the powers of the world. In that year we had reached the full stature of national manhood, and were as strong as the strongest nations of Europe in numbers and wealth-producing power.

After another ten years, in 1890, we found that, in effective size and strength, we surpassed in wealth-producing power and in numbers the largest of them.

It has been only a question of time when we should take our place among the nations as a real power in the management of the affairs of the world; when we should be counted with the great powers of Europe in the government of Asia, Africa, and the isles of the sea. It was a moment to be postponed rather than hastened by the patriotic citizen. When our power of producing wealth is increasing out of proportion with the rest of the world, and when our population is swelled by waves of migration from Europe, why should we be in a feverish haste to precipitate the new era — the era of close relationship with the states of Europe? For here is the parting of the ways, and the beginning of an essentially new career. Most of what is old and familiar to us must change and give place to new interests. Once the United States enters upon this career, all its power and resources must be devoted to adapting it to the new situation and defending its line of advance. For it cannot move back without national humiliation.

And it is this very summer that the hand on the dial of our destiny has pointed at twelve, and for better or worse we have now entered upon our new epoch as an active agent in the collected whole of great powers that determine and fix the destiny of the peoples on the planet. This new era is one of great portent to the statesmen of America. All legislation hereafter must be scrutinized, in view of its influence upon our international relations. We cannot any longer have that smug sense of security and isolation which has permitted us to legislate without considering the effect on foreign nations. Hereafter our foremost national interest must be the foreign one, and consequently our highest studies must be made on the characters, inclinations, and interests of foreign peoples. It is obvious that this study requires a greater breadth of education, more specializing in history, and in the manners and customs of European nations; their methods of organizing industries, as well as their methods of organizing armies and navies. We must even master foreign literatures and see what are the fundamental aspirations of the people. This points to the function of the system of education in the future of this country. This indicates the vocation of the schoolmaster in the coming time.

The new burden of preparing our united people for the responsibilities of a closer union with Europe, and for a share in the dominion over the islands and continents of the Orient, this new burden will fall on the school systems in the several states, and more particularly on the colleges and universities that furnish the higher education. For it is higher education that must furnish the studies in history and in the psychology of peoples which will provide our ministers and ambassadors abroad with their numerous retinue of experts and specialists, thoroly versed in the habits and traditions of the several nations. The knowledge required by our members of Congress and our executive departments will make a demand upon higher education for post-graduate students who have concentrated their investigations upon points in international law and the philosophy of history. Diplomacy will become a great branch of learning for us.

This has been felt for some time, altho it has not been consciously realized. In the past twenty-five years the enrollment in higher education, in college work alone, has increased from 590 to 1,215 in the million; it has more than doubled in each million of people. The post-graduate work of training experts or specialists has been multiplied by twenty-five; for it has increased from a total of 200 to a total of 5,000 in the nation.

The education of the elementary school fits the citizen for most of his routine work in agriculture, manufactures, commerce, and mining. But the deeper problems of uniting our nation with the other great nations, and harmonizing our unit of force with that greater unit, must be solved by higher education, for it alone can make the wide combinations that are necessary. Shallow elementary studies give us the explanation of that which lies near us. They help us to understand our immediate environment, but for the understanding of deep national differences, and for the management of all that is alien to our part of the world, deeper studies are required. The student must penetrate the underlying fundamental principles of the world history in order to see how such different fruits have grown on the same tree of humanity. We must look to our universities and colleges for the people who have learned to understand the fashions and daily customs of a foreign people, and who have learned to connect the surface of their everyday life with the deep national principles and aspirations which mold and govern their individual and social action. Hence the significance of this epoch in which you are assembled to discuss the principles of education and its methods of practice. There have been great emergencies, and great careers have opened to American teachers, in our former history; but you stand today on the vestibule of a still more important age, the age of the union of the new world with the old world.

HON. WEBSTER DAVIS, ASSISTANT SECRETARY, DEPARTMENT OF THE INTERIOR, WASHINGTON, D. C.

Mr. President, Ladies and Gentlemen:

For many years it has been my pleasure to know personally President Greenwood of your association. No man in the West has done more for the cause of education than he. It was largely thru his efforts that the public schools of Kansas City, Mo., became famous thruout the country for their high standard and excellence. And his countless deeds of charity and acts of kindness toward poor, unfortunate boys and girls, struggling for education in the years of the past, will live in the immortality that blooms beyond the grave. This association is to be congratulated on having such a noble president.

Doubtless the reason for my name appearing on the program tonight is because the Department of the Interior is especially friendly to school-teachers. Secretary Bliss, tho a very handsome man, is much older than I, and married, too; hence he has not the nerve that I have in facing good-looking schoolma'ams. But, nevertheless, he and President McKinley are about the best friends they have in this country; for not long ago, after putting their heads together for a moment, they concluded to break the record by appointing a western schoolma'am to the distinguished and responsible position of superintendent of Indian schools. And this is all right, for any administration that recognizes woman's right to make an honest living, if she is compelled to, by hard work, and then offers a reward for her honest toil, makes no mistake.

I have always had great sympathy for the teachers in our public schools; for I came very near becoming one once, but failed to pass the examination for a certificate. But, seriously, they do deserve sympathy; for a harder working, more patient lot of men and women cannot be found. And they are the poorest-paid laborers, for the amount of hard work they do, in the world's vineyard. I have known good teachers who would walk two or three miles into the country each morning, during the coldest winter weather, to the district schoolhouse, carry in the wood and build the fires, and labor hard all day teaching the good little boys and girls, and thrashing the bad ones, all for the munificent salary of twenty dollars a month, and board themselves.

While we honor the noble school trustees, who without salary look after the schools, yet we do believe that all teachers in the public schools thruout our country should be better paid. But we should not be discouraged with our lot in this world, for all things will be better by and by. To be sure, everyone at some time in this life feels that every fond ideal that gleams like a star on life's wave is wrecked on the shores of the real, and sleeps like a dream in a grave. And we often realize that—

> "In the spring the small boy's fancy
> Lightly turns to ponds and brooks,
> With about a quart of angleworms
> And a nickel's worth of hooks;
> Also a ton of patience,
> And of faith an ample store,
> To withdraw the wary bullhead
> From his covert to the shore.
> And that fancy never leaves us,
> As we stand beside life's sea,
> With painted bobs seducing
> Great results that ne'er can be;
> To discover, late at sundown,
> We have not attained our wish,
> But have traded off two pounds of worms
> To get one pound of fish."

However, the true, brave-hearted man or woman goes forward, regardless of the smarting cuffs administered by Dame Fortune in her peevish moments, to meet the demands of the age, the true exponent of common sense, wisdom, pluck, and real grit; devoting their time and talents to the actual needs and necessities of their country and its people.

It is upon the education of the masses that this country must depend for its still greater progress in the future. Not that education whose aim is especially to make experts; not simply to make a man a great navigator, to be able to plow the waters of unknown seas in search of unknown worlds, and nothing more; or simply to enable him to become a great classical scholar, to have at his tongue's end the writings of those wonderful geniuses who are enshrined in history and have been adorned by the poets with their rhythmic flowers; not to become an expert and exact in chemistry or higher mathematics; or to become a great geologist, to delve into the recesses of the earth and read its history in its layers of rock, clay, granite, and mineral; or to become a great geographer, and able to give the dimensions of mountains, plains, or valleys, and the extent of rivers, lakes, and seas ; or to become an expert philosopher, who can with ease read and interpret the phenomena of nature, and place her marvelous wonders before the minds of men, and cause her to contribute of her stores to the comfort and happiness of mankind ; or to become a great expert astronomer, whose comprehensive mind is able to scan the universe, whose heaven-aspiring spirit is able to soar beyond the boundaries of time and discover new worlds revolving in the realms of space, to watch them in their journeys, to view them in their grandeur, to tell the story of their past history, and to prophesy of their future. It should not be the object of education to tax to the utmost the tender minds of the young by drilling into them Greek and Latin, compelling them to wrestle with Xenophon's *Anabasis* and Cæsar's *Commentaries*, before they can read McGuffey's old English second reader ; or require them to master Horace and Livy, Virgil and Homer, before they can understand the pure English of Hume or Macaulay, Shakespeare or Milton, or before they are able to read intelligently the federal constitution and the Declaration of Independence. Nor is it the aim of education, as Professor Huxley would teach, to make a clear, cold, logic engine of a man or woman ; for that always wrecks manhood and womanhood ; or, as Matthew Arnold would teach, to make a man a Greek of the age of Sophocles, to bring in by literary culture that old age of "sweetness and light" and of "sweet reasonableness."

No, it is not the aim of education to make of man or woman a shriveled, selfish, dyspeptic, sniveling, hunchbacked, intellectual genius ; but its real object is to develop human power, to make complete, thoroly finished men and women ; to make the intellect the best inspirer of the heart and the servant of the will in all noble work ; in short, to make good, first-class men and women, who are able to hold their own in the great battle of life. For a nation's wealth consists, not alone in its broad domain and its natural resources, but in the intelligence and virtue of its citizens. Its nobles are not the men of royal birth, but the men of sober thoughts and righteous deeds.

In the public schools of this country the men and women must be educated who, under God, are to guide the old ship of state to a still more glorious destiny thru the beckoning seas of the future. That future demands that these schools shall be liberally supported, so that all citizens shall be sufficiently instructed to fit them for the manifold duties of good citizenship.

The public school is, indeed, a priceless boon to every poor man, for it will give his children a chance for elevation in our social and political systems. And the American farmer and laborer should realize that it is the very ark of his safety, the bridge across which his little ones may reach place and power and higher planes of usefulness in life. It is, indeed, the Aladdin's cave wherein they can find the bright jewels of education that will fit them to be sovereigns and rulers in the grandest of republics.

Parsimony to the public schools means death to all the grand hopes of free labor; death to all the wonderful possibilities in store for the children of those who toil. Liberty is not the child of ignorance, superstition, and barbarism, but the child of intelligence and of education. The love of liberty is a passion that has been wont to spring in the hearts of men since time began; so soon as their minds began to expand under education, however crude, in their breasts the fires of liberty began to burn. In all centuries and in all lands that passion has lived and defied rocks and chains and dungeons to crush it. It has strewn the earth with its monuments, and shed undying luster on a thousand fields wherein it has battled thru the night of ages.

And there seems to be something in the scenes of nature in this new republic, something in its beautiful landscapes, in its cascades and cataracts, in its luxurious vineyards, and orchards full of bud and blossom, in its waving fields, and in the dim vistas of its mighty woodlands; in the beauty of bud, of bird, of tree and flower, and in the pure and exhiliarating air of its hills and mountains, that inspires its children with an ardent love for liberty and knowledge. As in the olden days, when the imperial eagle looked down upon a consolidated empire, from the Orient to the Occident all roads led to Rome, so now in the passing centuries, in this new world of vaster extent and more varied interests, all roads lead to this republic; whatever there is elsewhere of thrift, of energy, of education, of culture, and of progress—this republic gathers tribute of the harvest. Here is the reservoir of the world's wealth, and of the world's energies. Here are collecting the great intellectual forces of the nations. Why is it that Egypt, with her pyramids and temples, stony records of the dawn of history; Greece, with her wondrous works of art, her power and renown, with her temples and statues crowning the Acropolis, and the golden splendor of her Athens; and Rome, with her grandeur and might as an empire, when contrasted with this republic, in this evening of the nineteenth century, dwindle into mere fragments of history? The answer is to be found in the ever-increasing intelligence of the people, behind whom stand the public schools.

With continued efforts to increase the opportunities, and to stimulate a stronger desire in the minds of the people, for education, what marvelous progress may we not expect of the generations of the future?

"Oh, royal mind, nor cease thy flight,
While sun and stars dispense their light,
And roll in grand array;
And when those orbs shall cease to shine,
When suns decay and stars decline,
Let onward progress still be thine,
And upward hold thy way."

All honor to the noble men and women who toil in these public schools. Let a grateful nation show a due appreciation of their work by cherishing those institutions still more in the future than in the past. And let us love our country and all its institutions more and more as the years are lost in the eons of time.

And let us rejoice today that sectional lines have entirely disappeared, and that we are a reunited people in fact as well as in name. For our soldier boys — God bless them !— the sons of men who marched in ragged blue and tattered gray along war's crimson highways, are now fighting side by side in foreign lands for the same country and the same starry flag.

Some of those boys left their northern homes to go to the front singing:

> "The star-spangled banner, oh, long may it wave
> O'er the land of the free and the home of the brave !"

And some went away from their happy homes in the sunny South with the sweet melody upon their lips:

> "Away down south in Dixie,
> In Dixie's land we'll take our stand,
> To live and die in Dixie."

But when the war is over, and the God of our nation has brought the eagle of victory to nestle with the sweet dove of peace upon the banner of the stars and stripes, our brave boys will return to the land they love, and a grateful nation will join them in a mighty anthem that shall fill the world with melody, until the forest isles will echo the strain, and mountains and valleys reverberate the glorious song ; until it will be heard by the liberty-loving people in the islands of the seas, and will startle tyrants on foreign thrones, as we shout our jubilee:

> "The union of lakes, the union of lands,
> The union of states none can sever,
> The union of hearts, the union of hands,
> And the flag of the union forever."

ADDRESSES

PRESIDENT'S ADDRESS

BY J. M. GREENWOOD, SUPERINTENDENT OF SCHOOLS, KANSAS CITY, MO.

The present educational tendencies in the United States, so far as an active sentiment has formulated them, are fitly expressed by the word "tempest-tossed." They may also be likened to a series of half-finished anatomical sketches, rather than to a gallery of well-arranged and acceptable portraits. All educational movements are felt more as a pervading and permeating force than as a formula of definite convictions, logically wrought out and broadened and deepened by an enlightened process of intelligent discrimination. Out of this ferment good will come, as the settling-down and purifying process is carried forward scientifically. No American educator has been bold enough yet to clamp copyright on all these collisions. While we may not be very far from the vanishing point of positive knowledge in some directions, yet, by a method that is very simple and very hard, we are certainly striving for knowledge that is very high and very low. Movements and countermovements mark the general upward tendency on the dial plate of progress. Have we not done wonderful things with coal, iron, the vapor of water—with chemistry to paint pictures, and electricity to talk for us? Is not the human mind, in all its aspirations, the fabled octopus? Is it not, also, at times, verging near the unhinged intellect of England's aged king—loosened from all law, delivered from all fear, and asking strange and unbidden questions of Deity himself?

Proverbial as is our genius for invention and adaptation, it is not a matter of surprise, but rather of congratulation, that the thinkers of America should attack simultaneously the same educational problems from different viewpoints. A thousand minds begin at once to examine any new issue as it is raised, oftentimes without taking pains to ascertain whether it be a recent discovery, or an old device under a new garb. It is an inspiring spectacle to see a young and vigorous nation, moving within the domain between ignorance and vast knowledge, impelled by a conviction that somehow the destiny of humanity is borne forward on its shoulders. Such a nation, then, as ours is now becomes the channel thru which a lofty influence is transmitted to other nations.

Yet, after a careful analysis of the trend of the best educational thought in this country, it must be admitted that we have settled only a very few issues of any permanent value; but that we are adjusting the child to his new conditions, and yet holding in trust his spiritual possessions bequeathed from former civilizations. We are beginning to discern what those possessions are, and how they are adapted to the entire circle of human knowledge. Like the swans on St. Mary's lake, "each theory floats double," each birth is twin. But, on matters educational, the American mind too often partakes of the nature of skates—hard to steer. Better thus than where members sit in rows and knowledge flows in uninterrupted streams from worn-out sources.

A nation, like an individual, may manifest great energy in many directions, or only in a limited sphere, as did the prophets of old. The general trend of educational thought in the United States has been, with rare exceptions, more in the line of practical affairs and the general leveling up of the masses than taking into account a very high grade of scholarship of those who would be the recognized leaders in the most advanced departments of intellectual research.

The general diffusion of knowledge among all classes has been the means of giving a broader degree of intelligence and a sturdier form of independence to the great mass of the American people than any other course that might have been chosen. As a nation of intelligent men and women, the Americans are probably the most versatile; but width does not always imply depth. Few, comparatively, possess what may be technically called the scholarly instinct. While the nation has displayed remarkable energy in many practical fields of industrial and commercial activity, it has put the educational machinery in motion and left it to run largely by virtue of its own momentum. The argument is usually made that we have been too much occupied in providing the necessaries and a few of the luxuries of life to raise up any considerable number of scholars; that our brightest minds have turned to other fields that promised fuller and more substantial returns. Such, for instance, as in statesmanship; power to project gigantic enterprises, where immense sums of money are required; to subjugate nature; to bring distant countries near together; to make new discoveries in the applied sciences and industrial arts; to build up a system of complex institutions, requiring the highest degree of governmental administrative functions; to shape into permanence a nation of marvelous resources in all the practical details of many-sided life. Disjointed as the words in a dream, yet, when we put the resources of this nation together, their greatness has hardly yet dawned upon us. Whether it be owing to the fact that we have not that leisure class which can devote its time to thoughtful investigation, or an indifference to such subjects, is a question that well deserves more than a passing notice. Possibly in some remote manner this condition is dependent upon our form of government. However, the preservation of our own country depends upon that deep, abiding hope, fed by a perpetual desire for national immortality, which burns in every American heart.

On the other hand, there has grown up with our history a sort of practical belief that, unless an education can be converted at once into a pecuniary value, it is hardly worth striving for. It has not been held, until very recently, that the highest order of scholarship was the goal to which the American youth should strive. Our colleges and universities at first did not propose to establish such severe tests as were required in the old world for graduation. This had its influence on the public mind. Then came the era of elective studies — rather an easy way of letting one get a degree somewhat cheaply. Whether this departure is in the direction of sound scholarship will be fully determined by results. As the case was tersely put a year or two ago, "to do nothing, or to do nothing hard," is a question of some magnitude.

When an American student goes to one of the great European universities, if qualified when he matriculates, he is as capable of doing the work required as any of the young men of foreign birth. Admitting this to be a correct statement as to the natural ability of our young men, then the difficulty lies in what is required in our leading institutions of learning. Whether our higher institutions of learning have not indirectly contributed somewhat to this condition of affairs by opening wide the doors for the admission of all kinds of students may well be questioned. The tendency at present is to foster more profound investigation, and to secure a higher grade of scholarship. This tendency is regarded as a favorable omen everywhere.

How far a still more complex civilization can be ingrafted upon the people of this country, and they continue to retain those elements that have produced our civic and material greatness among the nations of the earth, is a subject that challenges the best thought of this country. Whether a civilization should be something imposed from the outside by external agencies, or the expression of energy inherent within the people themselves — an outburst of their own nature into a substantial growth — marks the broad lines which distinguish national vigor from decay.

Historians for centuries have busied themselves in marshaling facts to show what elements had crept into the lives of ancient and modern nations that produced decay and death. Nearly all records preserved of olden times are but a series of guesses at the same great law. Startling theories are advanced in some quarters now, and boldly maintained, that we are deteriorating with a rapidity never before known in the world's history. It would seem that one result is inevitable — to bury the nation and pronounce the funeral oration, according to the philosophy of these pessimists. Such argue that competition is so keen, excitement is so intense, and individual life is so burnt down to aches, pains, and disappointments, that nothing is left us but to die decently. From the strained and broken intellectual and physical relations it is argued that the nation is on the verge of collapse, and national death is written in large letters over the faces of our people. While the external conditions of our people may be changed in many different directions, the social life remains practically unimpaired. But when the social conditions are changed or greatly modified, a complete transformation becomes possible, and serious consequences may ensue.

If it be true that the changes which have occurred have uprooted the old vitality which they displaced in the social life of our people, then it will have, if it has not already had, a deleterious effect on the nation at large. Whether a change has been beneficial or hurtful, or will be beneficial or hurtful, the simple test is whether it had its origin in the minds of the people themselves, or was it imposed by an outside agency? The most highly developed systems of civilization are the highly artificial ones —the farthest removed from the natural man. No nation living close to nature has ever borne the burden of a complicated civilization and prospered. As a distinguished writer well said: "We may make a dead house and call it civilization." This subject apparently resolves itself into one chiefly of brain activity and mental comprehension. To state this principle under another form: how much more education can a nation receive than its immediate ancestors? or, passing to the individual, how much more education can he acquire than his father had, or was capable of receiving? This answer will be modified by particular circumstances; but when it is applied to the mass, the answers would be tolerably uniform. Very careful researches tend to establish that from a tenth to a quarter more ideas may be put into each generation without any appreciable deterioration of mind or body. Granting this to be true, then any attempt to force a large number of ideas into the brains of one generation in excess of that of the previous generation will produce weakness instead of strength, and especially when nearly all the new ideas are of a quantitative nature. What effect our new inventions and improvements may produce upon the thoughts and habits of the American people I will not attempt to predict. It is the effect upon the average mind that I am concerned with just now, and the vast majority in this country are average men and women.

Whether a nation can be developed in its brain power beyond a certain degree without great danger is a physiological question which is now engaging the attention of specialists everywhere. They will answer the inquiry in due time.

Real education, no doubt, can lead the mind out to a natural growth, but what kind of leading this should be in order to preserve the people from weakness is getting to be a very serious matter, which requires the most consummate skill to handle wisely. Is there an education which causes deterioration of brain power? Can it be judged of by its effects upon those races which are regarded as being lower in the scale of living than are the nations of Europe and their descendants in America?

Whatever accomplishments have been imposed upon them by a superior race have not materially improved their condition. The contact of European civilization with lower races has proved, in most cases, a detriment. This fact is significant. If lower natures copy the faults of the higher ones, and not their virtues, then they have been leveled upward in the wrong direction. If deterioration is produced by putting too great a strain on the mental powers of the lower races, by a like parity of reasoning, the brain power of the highest and most civilized races will deteriorate when unduly stimulated beyond the point of effective resistance.

Instead of judging other nations by our own standard of civilization, and attempting to have them conform to our ideals, it would be a safer method for us to study more carefully the present civilizations of other nations, and, if they are declining, to ascertain the causes thereof, and then to fortify our weakest lines accordingly. Our civilization is one among many others, and while it may be strong in many directions, and the best one adapted to our needs, it would require modifications before fitting it to others, influenced by different circumstances. Evidently the success of any civilization depends far less upon any preconceived theories than upon the condition and receptivity of the people themselves.

Another element of weakness in our educational system, as it is administered, is that of instability; and, by virtue of the presence of this fact, it is one of the most serious drawbacks to uniform progress, and it results from a lack of standing on a firm basis of authority which introduces a certain degree of incoherence into its actions, and prevents the establishment of that kind of an organization which works with regularity, precision, flexibility, and caution. Under such restraints, clearness and precision of will and intelligent guidance of all educational efforts are enfeebled, leading to indecision as to aims and purposes, and hindering that exercise of carefully planned work, and prohibiting and greatly restricting that degree of forethought, which are necessary to eminent success in all great undertakings.

In theory the school represents the whole body of citizens, but this impartiality is, in part, illusory, owing to the very nature of our mode of administering affairs. While the schools are maintained and administered ostensibly in the interest of the whole, they are largely in the hands of a majority, oftentimes weak, precarious, and variable, and existing conditions are always threatened by a rival and tinged by a constant dread of losing what has already been accomplished. Here enter rival claims and conflicting interests, and whichever set succeeds, no difference how high-minded and how far they stand above any purely personal or pecuniary interest, they can hardly escape making some sacrifices to the party which elevated them into power. Everyone knows how fatal such precarious possession is in any undertaking which requires the very highest qualities of human insight, when it has to deal with an administrative organization designed to affect helpfully large masses of people. When all the interests of society, on the one side, are balanced against the property interests of a division of this same class, on the other, and the interests of all the children are set over against the former class, while the property interests also are guarded, it is evident that immediate and present interests will invariably overbalance those higher and more important interests which lie somewhat distant in the future. When present interests run counter to future interests, tho the future may be far more desirable as well as more beneficial, except in those rare cases in which educational bodies hold practically a life tenure, as the officers of endowed colleges and universities, a temporary expedient is invariably chosen as the one to bridge over the present emergency.

There is one compensating principle, always active, that needs to be considered in all public work bearing on this point, and that is the sentiment of honor with which many school officers and teachers are inspired. They are aware of the presence of the opposite party, severely critical and oftentimes merciless, and this puts those inside on their best mettle in order to deserve and to hold public confidence and respect. As powerful a stimulant as this motive is, and while it ought to be operating all the time, yet it is not conducive to the development of those scholarly traits which foster sound learning for its own sake.

From the foregoing reflections it is inferred that, until the public schools are freed largely from this impediment, clashing of interests will prevail to such an extent as to preclude the highest and completest form of educational work in this country.

CIVIC INFORMATION

Ought there to be a time for practical, political instruction in the schools of this country, at which time the boys and girls should be taught certain duties in regard to civic life? At the close of the rebellion the constitutional side of this question came into prominence, and it still holds its interest.

Flippantly we speak of rights, duties, and privileges, without stopping to analyze closely what these terms mean when applied to an individual in a private or public capacity. Each child in America is born into a legally constituted government. He comes more or less in contact with the institutions popularly called government. As soon as he is able to run about, he meets restraints, and he learns of uses and limitations. At the postoffice he gets a glimpse of the national government thru the postmaster, the letter carriers; and his knowledge is widened, too, by seeing stamps, letters, postal cards, papers, etc. Thru policemen, constables, justices of the peace, judges, and other officers, a confused notion of the power and the authority of the state — how laws are enforced, and how lawbreakers are punished — a vague concept of duty and its responsibilities, is formed in the child's mind. Not far from this period, notions of trespass, larceny, and other crimes, civil and criminal, emerge into consciousness, and from choosing persons to assist him or to work against him in his plays and games a crude knowledge of the formation of political machinery is developed. All these things come to the child by degrees — steps from which he must infer a great deal. At election times he hears much said about this party or that one, this candidate or that one, and this party vote and the other, and so on. But as he advances in years, he may not advance in wisdom in those smaller things which touch life on many sides. He may learn from the constitution of the United States, or from the constitution of his own state, in a general way, how the Senate and House of Representatives are organized, but as to the actual working of either body he may remain in dense ignorance all his life. Legislative bodies have their methods of working thru committees and otherwise, which the average citizen never understands, much less the child, unless he gets other knowledge than is usually written in books. To illustrate this more fully and forcibly: How widely different are our laws in regard to elections from the actual details in preparing all the machinery, conducting the campaign, selecting voting places, poll-books; appointing judges, clerks, challengers; numbering, distributing, scratching, folding, depositing, and counting ballots! No description can convey this information adequately; one must go thru it to know it, and familiarize himself with all the details.

In parliamentary and legislative matters working bodies should be organized in the upper grades, and a bill pushed thru its various stages till it becomes a law. In short, let the children assimilate this kind of knowledge and convert it into the faculty of doing, remembering, as Emerson says: "When the soul breathes thru the intellect of man, it is genius; when it breathes thru his will, it is virtue; when it flows thru his affections, it is love."

ART EDUCATION

There is a rapid awakening of the American people in all sections of our country on the subject of fine and industrial art education, and this is a hopeful sign of national progress and of permanent prosperity. Its full development will make the lives of our people richer and more enjoyable. We are at the beginning of what will expand into all that the most ardent advocates of art education now regard as remote possibilities. As Dr. Deems said upon one occasion, when speaking of what Peter Cooper had done: "It will live in history, it will live in development, and it will live in transmission;" and, more than this, it will live in the hearts and homes of our people.

It is not too much to hope that industrial and art education will become potent factors in settling equitably the somewhat disturbed social and economic conditions of this country. No thoughtful citizen forgets, for a moment, the ominous sounds that every now and then come rumbling to the surface indicative of the spirit of unrest. Certainly it is the part of broad and comprehensive statesmanship to take notice of such danger signals. Instead of exerting our highest forms of mental energy in attempting to connect the active present and the unknown future with a worn-out past, it behooves us to solve the problems of the present with reference to their bearing on the future. The life of a century or two ago, except to mark progress, has no great hold on the issues of the present, and the farther back, the less vital is the connection. This century has been richer and fuller and higher and grander than all the centuries from the fall of Adam to the death of Washington. All the great agencies of modern civilization are of recent origin. To face resolutely the future and its possibilities, and stand unfaltering by our country and sustain her honor, stability, and prosperity, is the duty of every educator.

LIFE AND CHARACTER OF EDWARD AUSTIN SHELDON

BY CHARLES R. SKINNER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, NEW YORK

When a fellow-laborer in the educational field lays down his burden, it seems fitting that those who live after him, and who have been inspired by his character, should pay a tribute to his memory. My theme tonight is the life and character of Edward Austin Sheldon. One year ago he met with us at Milwaukee. Tonight the waves of lake Ontario sing a requiem to his memory in his eternal sleep in the city in which he did his greatest work.

For more than half a century he gave himself, body, soul, and spirit, to the work of education. Courageous, sincere, enthusiastic, patient, persevering, he overcame difficulties, removed obstacles, won victories, where others with judgment less cool, with zeal less intense, would have been disheartened and driven from the field. New York mourns him by the highest right. It was New York state which gave him his great opportunity, but his aims and efforts were so universal, the grasp of his hope so broad, that no local limitations could bind him. We of New York rejoice that these fifty years of service were given to education in our own state, and that we are the inheritors of the fruit of his labors.

No man can live a noble life for threescore years and ten, and work in educational fields for fifty years as Dr. Sheldon worked, without leaving his impress upon the world, and exerting a powerful influence upon his state and country. His life work was not revealed to him in a vision. His way was not pointed out to him by the finger of fortune; his problem was hidden in the quarries, the solution of which must be drilled by trial and disappointment, and blasted by unremitting effort. He found the law uncongenial, business ventures unprofitable, and the ministry a field too narrow for his ambitions. He found not his work in these professions. Around him were multitudes of the poor, whose condition arrested his attention and touched his heart. To help them he organized a school, and on a salary of $300 per year began his first teaching. He had found his work, and he determined to know it. Horace Mann, Henry Barnard, and Edward Sheldon all attempted other pursuits, amid constant disappointments, before becoming what nature intended them to be — educators. Education and its wonderful possibilities became the inspiration of their lives. Enthusiasm for and consecration to the purposes of learning gave them fame.

Loving friends have told us the charming story of his useful life. They have told us of his Puritan birth, of his home and its congenial surroundings, of his early struggles, his college longings and experience — how he came to Oswego to meet his first discouragement in business; how he became interested in the free-school movement which he was compelled to abandon; how he organized the schools of Syracuse and gave them an impetus they still feel; how he was called back to Oswego by the free-school party; how he laid his plans for advanced instruction in the principles and methods of teaching; how, in spite of fierce opposition and ridicule, he steadfastly interested state and country in object-teaching, and established it forever as a mighty force in education; how, believing in patriotic citizenship, he offered his services to his country to preserve the union which he loved; how his plans developed into a school for the training of primary teachers; how the legislature came to his aid in 1862, thru the sympathy of the state superintendent; how, in 1867, the Oswego Normal School was accepted as a part of the great normal school of the state; how for thirty years he worked "like a Hercules," as Carlyle says, as its principal; how he resisted tempting offers to honorable fields elsewhere, preferring to finish his work here; how he was called into other states to assist in organizing method schools upon his plan; how men and women were attracted from every county and state and country to come within the charmed circle of his influence, and how they became instruments in extending that influence and in organizing similar schools in other states and countries; how, inspired by his growing success, institutions were founded to uplift the colored people of the South; how echoes of his influence came from the republics of South America, the Sandwich islands, and from far-away Japan; how his methods received the indorsement of the National Educational

Association — a grand achievement, indeed; how he wrote the books which have helped others and extended his power for good; how at the great Columbian exposition he was an honored figure in educational deliberations, and received a medal of honor for his beloved institution "for excellence of equipment, method, and wise usefulness;" and how, finally, discouragement gave place to hope, and defeat was crowned with glorious victory. Surely the "end crowned the work," and patient, self-sacrificing service had its reward.

Do we ask if such a life, with such a character woven into it, had an influence upon our educational theories and methods? It was more than influence — it was *inspiration*. Always holding high ideals himself, he inspired others with lofty purpose and noble ambition. He transmitted to others hope, and faith, and resolution, and many men and women today confess that whatever of success they have attained in teaching children they owe to his inspiration and influence.

Dr. Sheldon was distinguished for his purity of character, for his zeal as an educator, and for his persistent, progressive spirit, even to the last day of his life. His good judgment, his simplicity, his earnestness, his devotion to principle, were the bulwarks of his life. What he believed to be right he fearlessly defended in the face of opposition which would have crushed a man who had less faith. He was conspicuous thruout New York state and thruout America, not alone for his scholarship, but for his thoro grasp of sound educational principles and correct methods of teaching, for his power to penetrate an educational proposition and fix the value, for his ability to detect a fault or recognize a virtue in educational method. He did not claim to be a profound student of technical branches of learning, but his education was strong because it was broad, generous, and humane. What he knew he knew thoroly, and he made splendid use of his knowledge and his training.

The central thought which moves us now is that he was the first great advocate in the country of the proposition that children should be taught according to certain fixed natural laws which always have governed and always will govern the development of children and determine their possibilities. Believing in the doctrines of Pestalozzi and Froebel, he was their most distinguished representative in this country, and the first to point out the necessity of observing in the training of children certain unchangeable laws of nature which could not be violated without spoiling life. Mythology made nature an enemy and pictured it in hideous forms. It was reserved for modern philosophers — and Dr. Sheldon was one of these — to regard nature as a friend and not an enemy — something that should be studied and loved. He believed that every child represented nature as much as a tree or flower, and should be studied and taught by natural methods. He believed that education is a growth, a natural development — not adding to, but bringing out by proper method; that children are not all to be measured by one standard or governed by one law, or their character and usefulness in life determined by the arbitrary rules of per-centum calculations and estimates.

He said of his work many years ago: "In this plan of studies the object is not so much to impart information as to educate the senses and awaken a spirit of inquiry. To this end the pupils must be encouraged to do most of their talking and acting." In 1873 he said, in an address to the students at the Genesee Normal School: "I may judge your work by a standard which you do not recognize. I cannot determine the education of a child by its ability to answer questions in a given way. These answers may be learned from books. Rather let me ask a question to which they have not learned an answer from the text-book, and let them give an answer in their own language, from their own thought."

Was this the new education? Whether new or old, it worked a revolution in educational methods—in the proper treatment of the children. When the world became convinced that object-teaching was related to the happiness of its children, when it was certain that it could not be laughed down nor stamped out, this school and Dr. Sheldon's efforts became centers of observation. They were the Mecca to all teachers who had been led to believe there was a simpler, better way to teach children. His work led educators to give attention; and, when they began to think, conviction came. It was not a momentary flash, a passing thought or fancy, but a settled conviction. He was always in earnest, and, because he was in earnest, he convinced the thoughtful and won victories. He bravely defended the convictions of his own conscience on intellectual battlefields, which he never left except as conqueror. Thru his work and his influence in first attracting attention to this new principle in the education of children he helped to lay broad and deep the foundations of a system which will never again be questioned or attacked, but which today recognizes the power and scope and the possibilities of the kindergarten as a living, vital force in education, and places it within reach of millions of our children. It is no longer an experiment, but a settled fact, and we now know what it means to lead children early to think and do for themselves.

Beyond this, the influence which he exerted thru all these years has led our educators into other avenues of thought, and the principles which he advocated have developed well-organized plans of investigation. As a result, whatever is practical or valuable in child-study and nature study, as we find them, comes thru his teaching.

If his influence was felt in the proper education of children from a child's standpoint, so it has been exerted for more than a generation over those who taught the children. In all his teachings he believed that in the development of the true teacher there must be, not only broad scholarship and professional training, but behind and beyond all this must be the true spirit of the teacher. He taught his teachers to be independent and self-reliant — to work out questions for themselves, and not depend upon text-books. In this way his teachers learned to teach independence and self-reliance to their pupils.

We claim today that we have in the common schools of New York state a better knowledge of real educational methods, a better knowledge of correct educational principles, more teaching with heart and soul in it, and less form. If this claim is well founded, we owe much of the excellence of our schools, the spirit of our teachers, improved methods of instruction, to the influence of Dr. Sheldon, exerted upon the men and women whom he taught in this school and whom he led to higher ideals.

The reproductive and perpetuating power of a great teacher makes his influence felt for long generations. His methods, aims, spirit, life, inspire thousands to like him. His physical power, his mental qualifications and training, his moral culture, his spiritual development, carried out into thought, word, deed, form, character, make life. These fashion the teacher into what he is, and must be.

A teacher's influence is *what he is* impressed upon the pupils, school officers, parents, the community, the state. If the teacher is honest, sincere, true, upright, manly, noble, his influence partakes of his nature. If the teacher is pure, loving, virtuous, pupils consciously or unconsciously catch the teacher's spirit and become like him in motive and life. If the teacher is earnest, progressive, seeks always high and worthy aims, pupils go out from his teaching to perpetuate his methods and to reproduce his character and example in themselves.

Dr. Sheldon's influence will live and be powerful for years, when even his name may be forgotten. Teachers whom he taught will have visions of what he never saw, and will teach other teachers to whose sight even better things will come — a progressive and stimulating vision whose beauty and usefulness shall never end. Dr. Sheldon's quiet, peaceful, loving spirit, his patience, his courage, his consecration to his work as an educator, will live in the history of his pupils and in their devotion to duty. He was emphatically a teacher of those who taught teachers and made others realize the value and dignity of a true teacher's life. Behind his profession, behind his work, stood *the man*. His sterling manhood shone out in all he did thru his whole professional life.

As an author of educational works he breathed his sympathetic spirit into his books, and the influence of his thought and personality went wherever his words were read; and who can tell the power of a written word, conceived in the hope of helping others? Thru the printed page he multiplied his influence over teachers and pupils, and perpetuated his power. His advanced thought, his clear statement, his mastery of the subject, and his conscientious purpose made him as successful in touching the lives of his readers as in personal contact with those he taught.

In the educational associations of the state and country he was always welcome, and took a deep interest, not only in promoting their objects, but in the discussions which they furnished. Even if his associates differed with him, they admired his rugged sincerity, his earnestness of purpose, and the courteous bravery of his gentle speech. He was everybody's friend; he had no enemies in the educational field, and was never provoked in debate beyond the bounds of kindly firmness. The influence which he exerted in these associations was always in the direction of higher standards. His last educational visit was at Milwaukee, where his face, like a loving benediction, smiled upon those who gathered in the National Educational Association, a most familiar figure; and my last look upon my friend was as he mingled happily with the vast concourse of educators which gathered there.

We speak of great centers of light and heat, and their influences upon what they touch—upon nature, upon man, and field and flower. Dr. Sheldon was one of these great centers. The light of his life penetrated the atmosphere of many a life which touched his own, and this light will shine on for years and ages, and be transmitted to bless generations which he will never see. We who are left should rejoice that our friend did not outlive his work. He died with his armor on, and entered into the presence of the God he loved and worshiped with soul still stirred with affection for the institution which he builded and to which he had given so bountifully of mind and hand and heart. Surely he must have entered upon that higher life with blessed memories of work here which has given him so much happiness.

His last days were occupied with plans and hopes for further usefulness to the institution with which he had long been identified. If a personal allusion may be pardoned here, let me say that these hopes formed the subject of my last conference with Dr. Sheldon. He discussed plans for raising the standards of admission and establishing a higher course of study with all the zeal of a man who still had faith in the future, and his good heart was full of hope in anticipation of still grander achievements and greater usefulness in his profession. The fifty years which lay behind him were an inspiration rather than a memory. His face was always toward the rising sun.

His ideas will not perish. They have taken too deep root. It is for us, then, as we feel the influence of his life, his work, and his friendship, to carry on the labor for education and humanity which he left unfinished. We who knew him well, and were with him in spirit and heart, must follow him in the path made easier and more luminous for his zeal and enthusiasm. That which Frederick Douglass said of the immortal Lincoln may be repeated of our associate: "He could receive counsel from a child, and give counsel to a sage. The simple approached him with ease, and the learned approached him with deference."

He loved his work and put into it all the strength of his calm mind, tender heart, and trained understanding. His enthusiasm for his profession was so infectious that no one whose privilege it was to counsel with him could fail to be strengthened and helped. His greatest charm was his simplicity. Modest in his estimate of his own abilities, he was upheld and sustained at all times by the sincerity and integrity of his own aims and principles.

With the lapse of time his fame as an educator will grow greater, and his name will stand among the masters of learning who have given the best service of their lives to the uplifting of humanity thru education. There are two classes of educators—the worker and the inspirer. Dr. Sheldon was both.

It was a touching tribute to his memory published on the day of his death:

"The life he lived is nobler than anything that could be said of him. If we would correctly measure the man, we must measure the things he loved. He loved his home, he loved the children, he loved his country, he loved nature, and he loved his God.

"His love for these things—home, humanity, God—explains our love for him. He was kind and gentle and pure. His life was rounded and benign. In his teachings he kept step with civilization, progress, education, and virtue."

He builded his own monument while he lived, and his truest epitaph is written on the hearts of those who knew him best, as husband, father, preceptor, and friend; who were aided and inspired by his daily example and his beautiful life.

The brave, patient, high-hearted man no longer walks with us in the pathways of learning. He can now give to the fulfillment of his own work only the hallowed inspiration of his memory. His associates who witnessed his struggles will cherish the memory of his devoted life, and the younger generations of teachers who have been inspired by his example will long sound his praise. Proud as we are of his fame in his own city and state, we rejoice that the great work of his life was in no sense local or limited; that it was as large as liberty and as broad as humanity. His name and fame, therefore, are not the treasures of New York state only, but the possession of the nation. The historian tells us that, when William of Orange died by the assassin's hand, the little children cried in the street. The children of New York, whose school days have been brightened and made happier by the work of Dr. Sheldon, are not crying, perhaps, but they are putting their pennies together to build a monument to him who was pre-eminently the friend and helper of children. When we meet next year, I hope to be able to report that the first public monument ever erected to the memory of an educator in the Empire State has become an accomplished fact, and bears the honored name of Edward Austin Sheldon.

We who knew him will cherish the memory of the great soul that dwelt in a form so gracious; the sustaining strength of personal friendship; the achievements for education with which his name must be ever blended; the consecration of a life in tender sympathy with mankind—all these are far too precious to be lost from our memories, or permitted to perish from our traditions.

We who are gathered together in the name and cause of education—confessing the benediction and blessing of a life like his—may well pledge ourselves to higher effort, that we may approximate more nearly the moral courage, the spotless integrity, the all-embracing humanity, the unselfish devotion of personal powers to ethical ends, which were the living glory and will be the lasting fame of that great educator, and friend of little children, Edward Austin Sheldon.

THE ESSENTIALS IN UNITED STATES HISTORY TO BE TAUGHT IN ELEMENTARY SCHOOLS

BY WILBUR F. GORDY, SUPERVISING PRINCIPAL, HARTFORD, CONN.

The great aim of education is to reveal physical and human life to the individual, to the end that he may understand his relations to them. All-important questions for every individual to answer are these: What am I? What is the meaning of the world of physical and human nature surrounding me, how am I related to it all, and what are the possibilities of my life? From early childhood to the end of life we seek the answer to these questions in order that we may learn how to live rationally. We are ever seeking more life, and we truly educate others when we impart life.

A pertinent question for this paper to answer is, How does history aid the individual in understanding himself, his rights, and his social obligations to his fellow-men? In other words, What practical value has history in elementary schools? To answer these questions we need merely call to mind the true nature of history. It is a study of the human will, of which actions and events are but the expression. Events are the material facts which constitute the real truth of history. These material facts are nothing more than the language of the feelings, thoughts, inclinations, and motives of men, acting individually or collectively. Were the men honest, noble, and true? Had they worthy ideals—high conceptions of life? What were their joys and sorrows, their successes and disappointments, their hopes and aspirations? History concerns itself with men's ideals, and records the never-ending conflict of these ideals.

In these considerations we see the educational—the practical—value of history to the individual life. We study the lives of men, as such lives are revealed in history, in order that we may learn how to live ourselves. Their lives furnish us a "vicarious experience," illuminating our pathway and serving as means of warning or inspiration. We study the past that we may interpret the present and prepare for the future.

The function of both the writer and the teacher of history, therefore, is to explain the meaning of human life by means of the language of actions and events. Each event aids to get an impression of the underlying truth, the character of the impression depending upon the character of the event. It follows that much depends upon the selection of facts. The historian, even when writing for adult readers, must select his facts with the nicest discrimination. With far greater care must the teacher of history in the elementary school select typical facts which shall aid the pupil to get correct impressions of the truth.

The guiding principle of the teacher, then, should be the nature of the facts rather than their number. We have already seen that this principle must be adopted by the historian, even when writing for the purpose of developing thoro scholarship on the part of the mature student. But the development of thoro scholarship thru the acquisition of a considerable body of facts should not be a dominant motive in elementary schools. In these grades only a short time is devoted to the study of history, and during this time many other studies are also pursued. Under such conditions a large knowledge of United States history cannot be acquired. Higher aims than mere scholarship should claim serious attention. If, for example, the pupil acquires an interest in history; if he learns to read it in such a way as to appreciate its meaning; if, in a word, he so learns to interpret the meaning of events as to live in imagination amid the scenes of the past and make its heroes his companions and teachers; if such results follow his study of history, he has at his command the means of a continuous self-education of far more value than any number of mere facts indiscriminately memorized.

From these considerations it follows that only typical facts should be selected for use in elementary schools, and should be treated with sufficient fullness to make their meaning easily grasped. Then history becomes interesting because it is vital—because it enriches the life of the pupil.

But the vitalizing power of history is not secured by the mere selection of typical events. The writer and the teacher of history should be just as careful in so grouping them that their causal relations may be readily seen. From one point of view events are causes; from another, effects. If the logical connections are made prominent by intelligent grouping, important events can be given due prominence, unimportant ones can be dropped out, and history as a growth can be easily understood.

With these principles to guide us, we may now consider a little more in detail the essentials in United States history to be taught in elementary schools. Only a very little need be done with the early discoveries—just enough to indicate how America came to be discovered, how it received its name, and how it was proved to be a distinct continent.

When, however, America had been discovered and named, the great struggle on the part of the leading commercial nations of western Europe for control in America began. The four nations most prominent in this struggle were the Spanish, the English, the Dutch, and the French. Pertinent questions to be answered in the study of this interesting struggle are such as these: What were the aims and ideals of the parties to this struggle for control of the territory now belonging to the United States? Why, in the end, did the Spanish, the Dutch, and the French fail and the English succeed? To answer these questions only a small number of typical events are needed. If these are grouped about prominent leaders like De Soto, Raleigh, Hudson, and La Salle—all of them representing the aims and ideals of the countries they served—the story will be a thing of life appealing to life. If the principle of selecting truly typical events be adhered to, the narrative may be made brief and simple.

Before taking up the most important chapter in this struggle for control in what is now the United States, however—I mean the long series of intercolonial wars between the French and the English—life in the English colonies must be considered. It is a waste of time to study all of these thirteen colonies in detail. A just allotment of time urges the use of typical facts in representative colonies for the three groups. Virginia and Maryland may represent the southern group, Massachusetts and Connecticut the New England group, and New York and Pennsylvania the middle group. The all-important thing to keep in mind is that we wish the pupil to realize something as to what kind of people the colonists were, and what kind of lives—social, industrial, political, and religious—they lived. What were their manners and customs, their dress, their houses, their modes of travel and communication, their industries, their religious worship, their attitude toward education? How did soil, climate, and physical conditions influence their lives and occupations? In short, what kind of people were they, and what were their views of life in their new homes in America?

This special study of life in the colonies may be well made to cover the time from their settlement to 1689. By the use of three groups of representative colonies, the pupil can study the three parallel streams of colonial history without being lost in the mental confusion that must result from a strictly chronological treatment of the thirteen colonies considered separately. Then, too, by comparison and contrast of the life of the people in one group with that in the others, certain definite and peculiar characteristics of the people in each group may be distinctly traced.

At this point I would emphasize the value of the study of some carefully selected facts in the history of the pupil's own state. For many reasons, which space limitations forbid me to discuss here, I would earnestly recommend the teaching of local history in our elementary schools.

Having followed the history of the English colonies to 1689, we may well pause to consider the significance of this date, which marked a turning-point in American history. Up to this time there was little but a narrow, provincial spirit in the colonies. In a large measure each had selfishly gone its own way, without much regard for the others. But after 1689 three sets of historic forces — Indian wars, troubles with the French, and difficulties with the royal and the proprietary governors — by degrees brought the colonies into more sympathetic relations and prepared them for union. At this point, then, we may logically introduce the Indians and may wisely confine our attention to those east of the Mississippi. A few well-chosen facts about these people and their manner of life will prepare for the intelligent consideration of their influence upon the colonists, especially as the outcome of the fur trade and wars. The Pequot war and King Philip's war will suffice for illustrations of the nature of the Indian warrior, and of the general character of all their wars with the whites.

Just before entering upon the study of the struggle between the French and the English for control in America, the logic of history calls for a consideration of French explorations, especially in the St. Lawrence and the Mississippi valleys. The vital relation to this struggle of the Iroquois Indians, whose friendship and fur trade were secured by the Dutch, and whose bitter enmity was, thru Champlain's unfortunate gunshot, secured by the French, should be made conspicuous. These remarkable Indians played a very significant part in the conflict between the two great European rivals for empire in America.

To explain the real meaning of this struggle, only the last of the four intercolonial wars — the last French war — need be studied. Its causes, a few of its significant military events, and its lasting results should claim attention. .Why Braddock failed, and why Pitt and Wolfe led England on to victory, suggest moral lessons of untold value to students of human life. Pitt and Wolfe were great leaders, because they represented the highest and best in the people they led; they represented the noblest ideals of all England. Since those ideals were higher than French ideals, France was forced to give way to England in America.

In the study of the royal and the proprietary governors, attention should be mainly concentrated upon Berkeley in Virginia and Andros in New England. These men, earnest in their efforts to carry out the wishes of their royal masters and truly representing in America the Stuart tyranny in England, were important forces in preparing the English colonies for united resistance to England in the Revolutionary War.

In studying this war we shall wisely do more with causes than with military details. "George III. and Personal Government," "William Pitt and Taxation without Representation in England," and "George III.'s Attitude toward the Americans" are highly suggestive topics. So are "Samuel Adams and no Taxation without Representation" and "Patrick Henry with His Stirring Words, 'Give Me Liberty or Give Me Death.'" In discussing the causes of this momentous revolution, we should clearly bring out the truth that it was not so much a struggle between two peoples as between hostile principles in each of two countries. No more important truth can be taught than this, that there are two sides to every question. Certainly, in teaching this war, we should try to present the facts as they were, and not as they have been so often misrepresented. We shall wrong the young if we appeal to their prejudice rather than to their sense of justice. Only a part of England was opposed to us in the American revolution.

As to battles, a small number, like Lexington and Concord, Bunker Hill, Long Island, Trenton, and the principal events leading to the surrender of Burgoyne and of Cornwallis, will suffice to explain the real character of the struggle. Washington's trials and difficulties and the suffering soldiers at Valley Forge may well be made to teach lessons of the highest moral value to the life of every boy or girl.

After learning the results of the revolution, the pupil will be led to see why the confederation broke down. He should carefully note the lack of power in Congress, which constituted the central government. A few salient topics will serve to bring out this important fact and will prepare him to appreciate the need of the constitution, and also its fundamental principles. He might well give special attention to a few of the important differences between the articles of confederation and the constitution.

Thus far we have been studying the question, How did the United States come to be? The revolution brought independence, but not union. The constitution brought union, but not that strong, compact union that exists in 1898. The young republic was weak — so weak that it had not the respect of the great powers of Europe. For twenty-five years after the constitution went into effect, the United States was engaged in a struggle — mainly commercial and diplomatic — with England and France. No large number of facts need be taught that the pupil may know what this struggle meant. Of course, it culminated in the war of 1812, which resulted in our political independence of Europe and prepared the way for the Monroe doctrine, containing an outline of the foreign policy of the United States.

But while the struggle was going on with foreign powers, there was an equally significant one going on at home between two political parties, with hostile theories as to the true meaning of the constitution. Shall the federal government be supreme over the state? Shall there be a liberal construction of the constitution, so as to grant large powers to Congress and to the president? Hamilton said, "Yes;" Jefferson said, "No." Each of these men was sincere, and each was truly representative of a large political party. When these great political leaders passed away, they left behind them these same hostile political ideals, each struggling to overcome the other. But other leaders came to the front and bore aloft the standard of their followers. These leaders were Daniel Webster, who took the place formerly occupied by Hamilton, and John C. Calhoun, who took the place formerly occupied by Jefferson. These giants fought with mighty energy, using in the struggle the weapons that had been forged by their predecessors. In time Webster and Calhoun passed away, and Abraham Lincoln and Jefferson Davis stood at the head of their respective armies of followers. Under the new leaders argument and persuasion were dropped. Each side rushed to arms and engaged in a terrible civil war.

Of course, after 1820 slavery bore a most important part in all this struggle and should receive a due share of attention. How it came to have a place here, its industrial value in promoting a more rapid development of the South, its civilizing effect upon the negroes, its moral aspect, and its influence in leading the South to engage almost wholly in producing the great staples of cotton, rice, sugar, and tobacco—all these phases of the slavery question, as helping to explain the causes of the Civil War and as aiding the pupil to appreciate the great race problem in the South today, should be presented briefly and simply in American grammar schools. Such questions are not difficult to understand. In connection with the considerations of slavery, much should be made of the influence of soil and climate upon the course of history. The rapid development of slavery in the South, under the impetus of cotton growth and the use of the cotton gin, is a most striking example of the intimate relations between physical conditions and industrial, social, and political institutions.

Another noteworthy illustration of the intimate relation existing between man and the physical conditions surrounding him is to be found in our westward development. It has been well said that up to 1890 American history was largely the colonization of the West. Certainly the bitterness between the North and the South was about the question of extending slavery into territory lying west of the Mississippi. Now, in the West, the prairie lands, so fertile and so easily brought under cultivation, invited the laborer to begin life anew, where he could get a good farm for almost nothing. The railroad encouraged westward emigration by making the transportation of emigrants and goods rapid, easy, and inexpensive. It is interesting to observe that nearly all of this westward emigration was from the North. Moreover, when these western people began to find a market for their corn, wheat, and other produce, they traded with the North, because the North had what they needed. The North and the West found mutual profit in trade, and, having common interests, they soon found themselves having common sympathies, common political aims and purposes. Very naturally, when the clash of arms came in 1861, the West united with the North to preserve the union. The part played by the West in the Civil War and the reasons therefor are most vital to a right understanding of our national history. Connected with the development of this significant movement, prominence should be given to western settlement, western life, the difficult problems of connecting the East and the West, the influence of the plains, of canals, rivers, and railroads, and so on — all of which can be put so simply as to be made very interesting to the pupil.

The importance of the Civil War is not likely to be overrated, but the character of the fighting may be easily understood by the study of typical military events, such as the battles of Bull Run, Shiloh, and Gettysburg, the naval duel between the "Monitor" and the "Merrimac," and the capture of Vicksburg. The influence of the emancipation proclamation, and the relations between the North and England and France, are of vastly greater significance than military details. The manhood of the nation, as evidenced by the heroism on the part of both the Blue and the Gray, is worthy of special consideration, because it will prepare the youth of today for the sturdy, manly work always required of true citizenship. But for this purpose a few typical events, made interesting, are worth far more than thousands of insignificant skirmishes, battles, and other military minutiæ.

Only a brief space remains for the discussion of the years intervening between the close of the Civil War and the present time. The Civil War abolished slavery; it declared the nation to be supreme over the state. But new and difficult problems required solution in the days of reconstruction. The American boy should know some of these problems, for they will aid him in understanding the meaning of the South of today — the new South — a topic which should be presented with a due appreciation of its importance.

There is a new West also. What is that, and how has foreign immigration affected it? And how do the arid region and irrigation affect it and the country at large?

But there is more even than a new South and a new West. There is a new union, very different from the union that was sectionalized by slavery. What is that new union, as brought about by the Civil War and as largely modified by important events since the war? I admit that the difficulties of getting at the truth here are very great. We are too near the history of these years to get a right perspective of the events that crowd them. But we are certain of the significance of some events, because of their intimate relation with present problems. Grant's peace policy of dealing with the Indians may well be used in connection with some study of the reservation system and the Indian problem of today. Something should be done with such topics as the great exhibitions, as bringing out the wonderful advance we have made in art, invention, wealth, and education; something with the meaning of, and progress made in, civil-service reform; something with the labor strikes, as indicating the strife between labor and capital; something with the ballot-reform movement, in the interests of a better understanding of the relation between honest voting and good government; something with the tariff question, as one of the vital issues of the hour; something with silver legislation, as an aid to an understanding of what money really is; and something, also, with the foreign relations of the United States, especially in connection with the England-Venezuela controversy and arbitration. For the coming voter, and the coming woman as well, will serve their country with greater intelligence if they get even a few meager ideas of the relation of the United States to other nations. American boys and girls should learn that the country of which they are a part has, like themselves, moral responsibilities and duties, and that it can never realize a high destiny in the world by a mere increase in population and advance in material prosperity.

With considerations like the foregoing before him, the pupil is brought face to face with some of the vital problems of the hour, and of his relation, as a citizen, to the right solution of these problems. And here we reach the goal of all the study of his country's history. He has learned what his country has done for him. Is he willing to make a suitable return in loyal, obedient service? Has the legacy left by Washington and Jefferson, Webster and Lincoln, enriched his life by giving him nobler ideals of citizenship? In a word, is the sum total of his life larger because of the in-pouring of other and greater lives? If so, he has indeed realized in himself the true spirit of history.

THE ESSENTIALS IN UNITED STATES HISTORY TO BE TAUGHT IN SECONDARY SCHOOLS

BY PRESIDENT HOMER H. SEERLEY, STATE NORMAL SCHOOL, CEDAR FALLS, IA.

The statement of the topic assigned for discussion announces that the form and character of United States history, as a branch of study, are such that it is necessary to select the more important parts for assignment to the course of study for secondary schools. The quantity of matter possible to be used is so great and the quality so varied in value, as a necessary part of a liberal education, that it is very desirable to determine, if possible, the features that should be deemed as characteristically prominent in educational value. The determining of these so-called essentials has been attempted by competent and authoritative scholars and educators time and again the past few years, only to be soon reopened for rediscussion and readjustment. This association has also attempted several times to solve some of these problems, and has published great reports as conclusions on these public educational questions, only to find its ideals and notions either rejected or disregarded by those in control of affairs — the educational world apparently going along the same as before the documents appeared. It is certainly discouraging to find these proclamations as to policies and plans unrecognized and unacceptable, even if not unknown and unappreciated. No doubt, these great reports have had marked effect upon public education, yet it must be acknowledged that, considering the greatness as educators of the persons selected to do the assigned work, and considering the very excellent way in which their work was done, these reports have not had the expected effect upon present-day courses of study, since those in authority do not see fit to depart from custom and put into use the wise suggestions. These generalizations, when published, still need, of course, to be practically and prudently worked out — a most difficult task; indeed, so difficult that it is not to be wondered at that public sentiment still seems to be in sympathy with a condemned public practice, and that the views of the philosophers of the present are, as those of yore, ahead of their time and unable to be put to use by the practical people among whom they live.

The fact that progress and reorganization, in so huge a movement as public education in America, are necessarily very slow and tedious is often overlooked. That much can be effected in readjustment and in modification during one generation cannot be reasonably expected. Reform movements in education which expect to accomplish great things in a few years must always be disappointing, as such results are impossible in a country where the people finally determine all things, and where even educators are recognized as being only a little wiser and more trustworthy, even on educational problems, than are school officers and common men. Now, the course of study in the schools of America is the voice of the common people, and is not, in fact, the opinion of the educators. The sooner this truth is recognized and accepted, the better for all concerned, as the problem of reform and improvement could then more easily be solved in a practicable and possible way. United States history came into the public schools by common consent after the great national controversies of 1850–65. The people believed that the boys and girls of this great republic would be more in harmony as men and women on the true principles of freedom, and also the functions and meaning of government, if they rightly knew the history of the founding, the developing, and the protecting of these free institutions. It was believed that patriotism could be developed thru acquaintance with the story of the sacrifices made by the forefathers, the triumphs accomplished by the past heroes, as well as the sufferings entailed by strife and discord. The public demand became so strong that, in a few years, almost all public schools gave some attention to the teaching of United States history. It has been continued regularly since, tho greatly modified in form and object in many important particulars.

The first histories prepared for public schools, at the beginning of this reform movement, forty years ago, were based on the idea that the chief function of such history teaching should be to show that it cost much in life and treasure to establish, preserve, and maintain republican institutions. These early authors of school histories were closely in touch with the public spirit of the times, and their books had one supreme object, the indoctrinating the pupil with such parts of the narrative of men and events as would make prominent the story of trials, sacrifices, and accomplishments. As a consequence, much attention was given to the early days of colonization, the perils of the primitive settlement far removed from civilization, the meaning of abandoning Europe and making a home in the wilderness, the struggle with the savage population under adverse conditions, and the wars and strife with the mother country, as well as the victories of the new ideas of liberty and individualism that were prominent among a people far removed from the influences of a different civilization, and the old ideas of government and law. Therefore, the war idea, the struggle idea, the sacrifice idea, the patriotic idea, was paramount in these early histories, and the essentials became centered around much that was story, much that was interesting, and much that was inspiring. The idea of making history scholars, critical students of policies and problems, was not the end and object sought. These lessons were not made up of acquirement of facts and dates; they were not full of economic, civic, and social problems; the examination idea was entirely subordinated to the spirit idea, and the end to be sought was accomplished, if the emotions were touched keenly, if the heart was trained to beat sympathetically, if the inclination was prominent to feel the claims of the country upon the life, if the enthusiasm was apparent to stand for home and government and native land. This system of instruction may have been barren in scholarly fullness, it may have been unsatisfactory in scholastic tests, it may have been lacking in power of discipline; but it had its prominent redeeming features that the present teacher of history, as well as the present writer of school text-books, can well afford to consider thoughtfully, and to some extent employ.

Following this early work, after the public dictation had subsided, the schoolmaster and the chronicler came upon the stage and began an inside revolution. The scholastic notion assumed more control, and history was assumed to be an end in itself, not alone a means to an end, such as the first treatment had accorded it. The texts were revised to suit the new plan, and there began in the schools a learning of isolated facts and dates and events that was really a retrogression from the spirit of the beginners in history teaching. Classification, analysis, and outlining became emphasized, and the learning of these characteristics became a passion that is rarely excelled for blind submission. The essentials became then the names of men, the exact dates of specific occurrences, such as admission of states, inauguration of presidents, battles fought, legislation passed, and important measures undertaken. The test of a good student was no more responsive feeling, like patriotism, but ability to remember exactly the encyclopædic facts and state them in exact order. The good teacher became, not the one that could inspire and encourage, that could arouse interest and enthusiasm, that could develop patriotic conceptions; but the one that could so arrange devices and outlines, and so secure discipline thru marks and personal exactions, that the pupils would become encyclopædias ready to be consulted by anxious inquirers — prepared to say who, where, when, how, what, without end.

Since the time of John Sturm, at least, the teacher's province seems chiefly to have been, not to question the province of a branch in the course of study, not to try and find the function of education in civilization, but to invent some cunning and powerful methods and management whereby the greatest amount of subject-matter could be taught in the least time with the least labor. Of course, such a treatment of a living subject could have no less an effect upon public opinion than, after a time, to produce a reaction and finally compel a complete readjustment. It is certainly acknowledged today by the mass of thoughtful people that such an object in history teaching is unworthy of public approbation, and that a more reasonable and useful selection of the essentials is necessary, or else such study must fall far short of doing for the child what the American public sentiment actually regards as the supreme end.

Out of this chaos of dissatisfaction has developed recently an attempt to retrieve the past twenty years and again return to first principles, seeking patriotic citizenship and living enthusiasm as the true end to reach in all history teaching. From this reaction has come, therefore, a great expansion in the field of United States history work, until the narrative in the text-book is required to cover civic, economic, sociologic, philosophic, and educational studies. History work today attempts, not only to tell the story of civilization, but also to interpret the problems involved, to ascertain the ethical content concealed, to portray the philosophical trend of thought in the body politic, and to point out the way to governmental safety, reform, and reconstruction. The aim is, therefore, not only to have history study make good patriots in times of great national danger and develop good citizens in times of peace, but also to make good men, good thinkers, and good scholars out of the pupils who pass thru the public-school curriculum. This makes the essentials so many in number that the old course of study cannot admit them; this calls for such lines of differentiation and correlation that the time able to be granted will not be absorbed in needless facts and unimportant details; this demands such discretion on the part of the teacher that special preparation to teach the subject is an absolute necessity. The old way of selecting any fair scholar to teach history will not now suffice. The very indefiniteness of the things to be taught calls for the most careful consideration, while the manifoldness of the object to be attained upon the life of the pupils makes the task a great one. What the essentials ought to be in the present-day course of United States history for secondary schools depends, therefore, entirely upon the quality of the teachers that do the work. If the teacher does not possess the real historical spirit, if he does not have himself the proper civic emotion, if he does not himself possess the genuine patriotic disposition, if he does not acknowledge and feel the sincere ethical object of human life, he cannot teach properly and successfully the detailed essentials so that the actual work planned is accomplished. There is no other branch in the course of study that calls for as much originality of conception, that needs as much individuality of interest, that requires as much wisdom of insight as to means and methods, that exacts as much breadth of knowledge united with a keen discrimination as to differences in values of thought and conclusions from the teacher, as does that of history.

The possibility of such a variety of courses in history is so great, the ways of conducting the progress of the work can be so many, the things to be accomplished can be so different at the same stage, the choice of materials and method is so important at all stages, that the teacher, the guide thru this maze of civilization, should be able to rise to this greatest of great privileges in educational work and become a master, indeed, of all the gifts of personality, insight, and judgment, so that the work may become a real inspiration to the pupil and produce in character, in tone of life, and in supreme affection the inclinations and the tendencies that are a true response to the public demand for genuine educational results. There must be much variation in the essentials to be taught, as there are essentials and essentials, as there are teachers and teachers, and classes and classes — there being, indeed, no one selection of essentials that can be able properly to supply the universal need of the pupils to be educated. Since this is so, the necessary curriculum can only be satisfactorily determined when the class status is known and the teacher determined, and, until the public recognizes the need of a history teacher being a specialist of specialists, the work of teaching history and the results of teaching history in secondary schools will be very unsatisfactory. Outlines, plans, and methods, the mechanism of the school, cannot be a substitute for the thoughtful, critical, inspiring teacher; and the mistake of modern effort in many educational lines is the attempt to substitute organization and some form of supervision or direction for properly balanced and qualified instruction. Uniformity of matter, or of method, or of plan of development, or of scheme of instruction, may give a beautiful and attractive system, but no one, nor even all of them, can insure the necessary spirit, the real character, or the required efficiency. On the scholarship, the skill, the training, and the ability of the teacher alone must depend the final solution of the assigned problem.

DISCUSSION

U. G. **Palmer**, county examiner, Oakland, Md. (discussing Principal Gordy's paper). — The theoretical is often far from the practical; and equally as often is it impossible to make the theoretical practical. And yet, if there were no theoretical, if there were no ideals far beyond, and perchance out of reach of the real, how commonplace would the real become!

My desire is to enter into the discussion of this subject, as it practically affects the great mass of common-school teachers of our broad land — that class of teachers with whom I have directly to deal, and who make up the rank and file of our great teaching fraternity.

On the *objects* of teaching United States history depend the *essentials*. If we wish to master the facts of history simply for the sake of the mastery, then, in my judgment, history becomes to the school curriculum what the skeleton is to the study of physiology — a mass of dry bones.

History is the study of the motives and inspirations of men, as manifested in their deeds and actions.

There is a cause for every event of history. The events are the results. The teacher of history must trace back from the event to its cause, and the student should be directed properly in doing this work. There were motives in the minds of men for these causes. Behind all, something prompted all things. If we can grasp the primary motives, how simple it becomes to master the events! They are the logical sequence. No other events could follow such causes. The teacher of history must be versed in human philosophy. It needs a mind of greater discernment successfully to teach elementary history than it does to instruct in Greek or mathematics. History is a science. It should be taught as such. But perhaps it is not necessary to prove this to pupils. Man is the unit in this science, as hydrogen is the unit in chemistry. Out of the mind of man sprang all history.

A century ago the institution of human slavery was prolific in our soil. The Puritan and the Quaker increased and multiplied. American history became a series of compromises between the exponents of an absolute right on the one hand, and the Old Testament advocates of the sunny South on the other. Right will always prevail. "The sun in his course across the continent no longer rises on a master or sets on a slave." The motto of the American mind today is, "Onward and upward." We not only banish oppression from our own shores, but we are practically answering the question, "Am I my brother's keeper?" to the end that every throne in Europe, before the close of another century, will have problems too difficult for its solution.

The history of human slavery for the century ending with the rebellion is the history of the South — its career and development. The agricultural and commercial development of the mighty West for the past decade is the history of the American people. Environment in both instances has played an important part, and is a factor in all cases on which history-making depends.

The nation — the composite citizen — has its infancy, youth, manhood, and old age, the same as the individual. Our infancy is the period of exploration and discovery. The colonial period is our childhood. These epochs are of importance to us in teaching the essentials of United States history only in the light of their bearing on our youth and manhood; and only such things are necessary to be taught. The teacher can rivet the attention and sharpen the appetite for history by setting forth in bold perspective the marvelous things in the exploration, settlement, and expansion of our country; and too much importance cannot be attached to the educational value of the creation of a thirst in the pupil for a comprehensive understanding of the philosophy of history. Scholarship and culture are the result.

From a purely national standpoint our country was born in 1776. She came forth like Minerva when she sprang from the brow of Jove — of mature years and development, fully equipped for her mission. All before was prenatal culture, altho extending thru infancy and childhood. Then began our wonderful growth in expansion and development, only temporarily impeded by wars, panics, and internal dissensions. What a phenomenal development the student of history has to record — industrially, socially, and commercially! The history of this development is the history of our country. Man is the prime factor; environment his assistant. We read of the administrations of the various presidents, the wars with Great Britain, Mexico, and the Barbary states, of the panics of 1837 and 1873, of the purely national topics of politics and finance. But they are to the great stream of industrial, social, and political development what the rivers running thru the land are to the mighty ocean — only the merest tributaries.

All hail the teacher who can, with cultured eye and generalizing mind, grasp the whole field of history and, looking beyond the mere events of a day or a place, lead the student to comprehend the purpose for which our nation was born and why she lives, and teach the broad principles of history, the events of which are but natural results.

God speed the day when our common-school teachers of history may "trace clearly the relation of cause to effect, appeal constantly to the reason rather than to the memory, and from the first lead the pupil to see and to understand the philosophy of history." Somebody has said that the three eyes of history are geography, chronology, and biography. The eye is the surest avenue of knowledge. Hence the map should be the teacher's *vade mecum* in the history recitation. Geography and history go hand in hand. The former exerts an untold influence on the latter; therefore it must be taught with it. And there are some dates which constitute the A B C of history. The student must know them. What would we be today if there had been no 1492 and 1776? Inasmuch as men make history, and the lives of men and history are identical, how fascinating and essential become the biographies of the leaders among men! History without great men is impossible. History surely has three most effectual eyes in geography, chronology, and biography.

One of the paramount duties of the teacher under republican institutions is the teaching of patriotism — love of country. And what a land this is for that purpose! The intelligent subject of no prince, king, or potentate on earth can breathe the pure air of this land of liberty for a twelvemonth without being imbued with its freedom-inspiring principles. The subject of a monarch who changes his citizenship to that of another monarchy never loses his love and sympathy for home and fatherland. Not so with the man who comes to us and becomes an integral unit in our political system. For example: My nearest neighbor was born and educated in Germany. He was drilled in the kaiser's army. He is a veteran. He served in the Franco-Prussian war. He was at the siege of Metz. But he is an American citizen. When Germany congregated her seven warships at the Philippines, his prayer was that Commodore Dewey might send them all to the bottom of the Pacific.

And with all the means and material we may use we must not lose sight of the pupils. There is an inspiration for them, inciting them to the highest ideals, in letting them know that they are the best the world ever produced. They are the product of 6,000 years of existence. In their veins courses the blood of kings and queens and bards and sages—the greatest the world ever saw. They are the lineage of Adam and Noah. Their forefathers were the kith and kin of Cæsar and Alexander. It behooves these boys and girls that they act as their noble heritage demands. They are the blossom and the fruit of the world's best endeavors. We must see that they know and appreciate these facts and govern themselves accordingly.

W. C. **Lansdon**, principal of high school, Fort Scott, Kan. (discussing President Seerley's paper).—In my judgment the essentials of American history in secondary schools may be discussed under about four heads: the spirit, the method, the subject-matter, and the results. From the study of American history in secondary schools, in the spirit that has been advocated here before you, we gain a broader and more general view of the subject than at any time heretofore in scholastic experience. No secondary school should undertake the study of American history without the assistance of a thoroly equipped library; with the assistance of the library, the methods of the laboratory may be applied and the desired results obtained. In determining the subject-matter there is a considerable problem before the teacher. If the details of history have been well studied in the elementary school, the pupil is ready to investigate the principles that underlie the development of the political institutions of the republic. My own custom is to take up the constitutional and political history of the republic, deferring for the time being, except as incidents, the study of the wars that have occurred; for, after all, the wars are but the results of disagreement upon political questions, and we can get a better conception of the meaning of the political principles over which men have quarreled by studying the principles than by the study of wars. The political institutions of America are not ready-made for this continent, but have their roots away back in the history of the human race.

A few days or weeks may be profitably employed in studying the origin and development of the system of local government, out of which has sprung the federal government which we enjoy today. After the preliminary study of fundamental principles of democratic government, the next essential subject to which the pupil in the secondary school should be directed is the history of the formation of the union. The secondary school should trace thru all its stages the development of the principle of federation, which resulted in the adoption of the constitution in 1787. The New England federation; the plan proposed by Franklin during the French and Indian wars; the Stamp Act; the first and second continental congresses; the articles of confederation, which succeeded the close of the Revolutionary War and preceded the adoption of the federal constitution; the formation of the constitution, its compromises, the discussion of it, and the result finally reached by the adoption of that instrument—these, in their turn, it is essential that the student of American history should carefully study in the secondary school. From that time forward the political history of the United States, until 1860, and all of the great political questions that disturbed our people, and caused turmoil during that period, hinge about a special question as to whether that constitution that was framed in 1787 should be interpreted broadly or strictly. Out of that grew two or three other questions. When Washington became president of the United States and Hamilton secretary of the treasury, and the first cabinet was organized, there was practically no division along political lines; but in the very first administration the people drifted into political parties, and there was much discussion of the financial plans proposed by Hamilton. When we study the financial history of the United States, and the history of this republic as related to the institution of slavery, we shall discover about all there is to know concerning the development of political institutions, and the separation of people into political parties. From Hamilton's time to 1860 the people of one section of the country believed in the doctrine of strict construction of the constitution, not because they had any previous prejudices in that direction, but because it was to their interest to believe that way. People in another section believed in a liberal interpretation of the constitution, because it was to their interest to believe that way. So this apparently fundamental difference among the people of the United States as to constitutional interpretation, in a primary sense, in my judgment, grew out of different and conflicting interests that were largely due to one or two institutions. Trace thruout this period from 1789 to 1860 all the various changing political views, and the wars as incidents, and the pupil will get some adequate conception of our history during that period. This method of study that I have briefly suggested for the pupil of the secondary schools will give all of the history desired, and, in addition, the culture that a student acquires from the study of history. The scientific method of studying history does not consist in the acceptance by the pupil of everything laid down in his text-book. The investigation of questions in history by reading a number of books, of those who have made the study of the subject, inevitably leads the pupil to compare systems and analyze them as to their worth, and finally to reach a higher intellectual plane in his generalization, and to think for himself. The future citizens of the republic must be better qualified to deal with the great political questions, and, unless the study of history clothes the pupil with this power, we have, in my judgment, almost totally failed in our object.

From 1860 until the present time the history of the republic is much more largely industrial, social, and sociological than political, and it requires a higher type of study to grasp these subjects than the political questions which arose prior to that time. I have examined courses of study from secondary schools from every part of the republic, and you have no idea what a large number of them consider it not worth while to study American history. The high schools have just begun to awaken to this subject. I believe the gospel of American history should be preached by this association, and its importance urged upon the secondary schools thruout the republic — that they may see that this subject should have its proper place, and is given a proper amount of time, in the course of the study in the secondary schools. If this is done, there will be no trouble in educating patriotic citizens. When the pupil leaves the public school, he should have a broad and adequate conception of the origin, the development, the struggle for supremacy, and the final triumph of the principles of constitutional, political, and social liberty embodied in the constitution of the United States and exemplified in the institutions of this great republic.

MR. CORLEY, of Pennsylvania. — I desire to call attention to two points. One is the partial method in which United States history has been written — exclusively from the New England standpoint. I think the most dangerous lie is half a lie — just enough truth in it to make it pass current. What is said from the New England standpoint is true, but it is not the whole truth, and the suppression of the other part renders the history inadequate. A great deal is said in history about the purchase by William Penn from the Indians, but not a word is said about the colony established in Delaware, where the Indians were paid for their land. I should like to emphasize the fact that there was a governmental restriction upon immigration to these political colonies on the Delaware of persons of good moral character. It was not permitted to make these American colonies a dumping-ground for criminals, as the English government did; and the Dutch are entitled to great credit for that policy. How little there is said of the Dutch, except that the English finally conquered them; that seems to be an important fact with regard to the Dutch. Nothing is said of the oppression of the Dutch by the English. Nothing is said about the Germans, who were a bulwark against the Indians, and who kept and saved the land along the shore. Very little is said of the freedom of religion, so prominently made a cornerstone in Pennsylvania.

Now, fellow-teachers, if we are to teach history, let us teach the truth; let us say that the German Quakers of Germantown were the first people on this continent who insisted that slavery was wrong and should be abolished, and not because of climatic reasons, as Daniel Webster put it, but because it is wrong, and because a negro is a man and deserves to be paid for his labor. For that reason the protest was made in 1688 in the Quaker meeting that slavery should not exist in Pennsylvania.

Then let us realize that there were thirty-six years of our national existence, during which Virginia furnished presidents for thirty-two of those years. Let us forever give credit to John Marshall for his masterful interpretation of the constitution.

Much has been said here about the philosophy of education in the secondary school, but it has no place in elementary schools. It seems to me the time has come when we should learn that the teaching of history in elementary schools should be biographical, as the only method for the child up to fourteen years of age. Let the children see life as it is illustrated in the biographies of eminent men, and it will have a moral as well as historical value.

E. B. PRETTYMAN, state superintendent of public instruction, Baltimore, Md.— In view of what has been said, I desire to say to this audience of thinking people that the history of my state of Maryland is totally unknown to the people of the nation. It is only thru the system suggested by our friend from Kansas City that the history of the different states can be molded into a great harmonious whole. Now, I assert that the state of Maryland, in its colonial time, established three great principles that have never been acknowledged or known thruout the country. We recognize that our New England friends wrote the histories that went into the schools, and naturally they wrote those things about which they knew most, that were local, and about which they cared most; and we honor them for it. When we go thru New England, we see that every spot is historical, and we glory in their local patriotism. But the glorious history of Maryland, as evidenced by the Maryland historical societies and their archives, should be published to the world. Maryland, in the first place, is the land which gave the world the right of ownership of land. Lord Baltimore was the absolute owner of every foot of land by grant from King George. Nevertheless, this great and good statesman and Wallace Colbert directed his brother Leonard to pay the Indians for their land, which they did. It was here in Maryland, first of all on this continent, that land was purchased from the Indians, in 1634, at old St. Mary's.

It was here that religious liberty was first proclaimed and established, and a law enacted that every man should be allowed to worship his God as he pleased, according to the dictates of his conscience, without molestation.

SUPERINTENDENT L. E. WOLFE, Kansas City, Kan.— I am firmly of the opinion that history, as an inspiring story, should come very much earlier in our school curriculum than it now comes. A very large per cent. of our schools do not touch history below the eighth grade or the grammar school. The essential thing in education is the relation of education to conduct, to action, to deed. History is the record of events, of deeds, where men have had two courses before them and have chosen one and stood by it, and poured out their blood, whenever necessary, for principle.

Now, the great question is how to teach history that the pupil will feel all the time that he is upon a great historical field, where he can learn how to decide questions correctly, as pupil in the school, as member of a family, as member of the church, and as citizen of the state.

I would emphasize the fact that no one ought to be content with the study of United States history alone. How the history of our country carries us back to the history of the Anglo-Saxon people! We ought not to hate England. The Lord knows we owe much to dear old England. We should understand how civilization roots itself back in all the past.

David K. Goss, Indianapolis, Ind.—If there is any purpose in teaching history in schools, it certainly can be profitably taught before the eighth grade. All over western Europe we find the special studies in history and political science have been pursued and have equipped the children for an understanding of the affairs of life. If the American student would go into one of their seminaries, he would be surrounded by boys and young men far better trained than he in history, and possessing far more general information. It is true the American teacher, in general, is not ready to become a teacher in western Europe. The only thing to do is to begin with what we have, to lay down courses of study, and gradually to fit teachers to carry on this important work. Every line, every sentence, every word of history has a meaning, and that is the end to which the history taught in our public schools must tend. There is a great deal to be learned from the history which we are making now.

Dr. Charles A. McMurry, Normal, Ill.—We people who live in the Mississippi valley are beginning to believe we are a very important part of this great country. We have discovered recently that more than half of the people of the United States live within the boundaries of the Mississippi valley and the lake states just a little to the north. The boys and girls of the Mississippi valley, that great central empire of North America, will constitute a large part of the future teachers of our land, and so it is that Illinois, Michigan, Minnesota, Indiana, Kentucky, Tennessee, Louisiana will have a great contribution to make to the cause of education — perhaps more than Pennsylvania or Maryland.

I believe the time is coming very quickly when a great educative influence upon our common schools will come to us thru these biographical pioneer studies.

I should like to suggest that we not only have all this material which has been collected, but that we begin to use it; that our teachers — and especially those who are teaching in the third, fourth, fifth, and sixth grades in the Mississippi valley — shall get hold of these stories, and shall not only get hold of them, but shall learn how to use them. What effective work can be done by a teacher who can stand before a class and tell one of those stories of the early life of Lincoln, in the third, fourth, or fifth grade, and tell the story in such a way as to inspire the pupil with a desire to emulate that great man! There is an abundance of historical material in the Mississippi valley which is never used. The place where American history is to be brought to bear upon the boys and girls in our schools is in these earlier grades, where biographical stories, if handled with skill by enthusiastic teachers, will produce useful and permanent results.

THE ESSENTIALS OF ENGLISH COMPOSITION FOR ELEMENTARY SCHOOLS

BY PROFESSOR EDWARD R. SHAW, SCHOOL OF PEDAGOGY, NEW YORK UNIVERSITY

Under "The Essentials of English Composition for Elementary Schools" I shall comprehend every means that contributes to give a pupil the fullest and freest command of English it is possible to give in the elementary school. More can be done, I am confident, than has been generally attained in this direction. The error of the past has been the loss of time and the waste of effort in teaching English from its formal phase, largely as an end in itself.

The first essential of English composition to be secured in the elementary school is correct spelling. There is abundant evidence on every hand to show that the method generally pursued today in teaching spelling is not a method which gives satisfactory results. Some spelling can, of course, be taught incidentally, but in so difficult and arbitrary a matter as English spelling a definite time must be set apart for it in the school program, when spelling shall be pursued as a regular exercise.

The first point to be considered in this connection is the gradation of words. The plan of leaving to the judgment of the teacher the selection of words for her grade is altogether too haphazard a one. This plan may be permitted to some extent, but it ought not to be the exclusive method; for under such conditions there is very little guidance as to the vocabulary, its extent, or what range of words shall be given in the various grades. With such a plan it is difficult to know what the omissions are. I believe, therefore, in a carefully selected list of words suited to the various school grades. Such a list could be determined very easily in any school system by a simple investigation. There are, I believe, words that may best be learned in the second and third grades, words which would best be learned in the fourth and fifth grades, and so on for the various grades. A list of this kind would include words which children are likely to miss and words which may be most easily acquired in the various grade periods of school life. Such a list would constitute the best kind of spelling-book, a spelling-book, moreover, which ought to be made by every system of schools. In the absence of such a list, I stand for a spelling-book and regular work in it.

But after we have determined the collection of words, the way the pupil is to be led to learn those words is of great importance. The appeal to the eye in learning to spell, which supplanted an old method that grew out of the best judgment of decades of repeated test by schoolmasters, is a method which the best pedagogy of today cannot sanction as a complete method of teaching spelling. If we are to obtain better results in spelling, that which I put as the first essential of the elements of English composition, we must adopt some of the wisdom which showed itself in the method of the old schoolmaster, and which we for the past generation and a half have thrown aside. If we require the pupils, in learning new words, to study these first orally, pronouncing each word at the start, then each syllable and the syllables cumulatively, and ending with the pronunciation of the whole word, we are appealing to more avenues of mental approach, and are, therefore, making easier and firmer the associations out of which that word is to rise when the pupil summons it. In such a way we are appealing to the eye, to the ear, and to that part of the motor mechanism which is connected with speech. We have here, then, the aid of three strong sensory avenues instead of one—as, for instance, when we appeal to the eye. After the pupil has prepared his lesson in this manner, we may then bring in the written practice upon this basis of preparation, and employ again the eye and combine with this the motor mechanism which lies in the hand and arm. With such a method I believe that very little time would need to be given to spelling in the seventh and eighth years of the grammar grades—the time when it is generally found so necessary to spend as much time as possible in spelling drill. Thus time may be saved in these grades to devote to the rules for spelling and to the etymology of words. Etymology should not, however, be taken up in the routine and uninteresting manner so common, and which calls for not much else than sheer, dull effort in verbal memory. It should be treated in connection with composition and should serve to add variety to the pupil's language study. To lead into this, begin with words with some point of interest in their history or whose derivation is easy to be traced, as: fortnight, good-by, furlong, topsy-turvy, volcano, mountebank, calculate, astonished, sincere, trivial, capricious, charlatan, etc., and then gradually work out to the more formal analysis of words. All this need not follow any alphabetically arranged list of roots, prefixes, and suffixes, but advantage should be taken of the recurring occasions when the pupil's attention may be directed to words that become the center of opportune interest. By leading the pupil to seek out for himself the connection of thought, and also to trace causal connection in analysis, he acquires a power to help himself, and an interest is awakened because more phases of mental activity are thereby aroused, and the study lifted out of dull, spiritless, mechanical memory.

The second essential to be secured is what I may term "feeling for English." If I were required to make a choice between technical knowledge of English and what I may term "feeling for English," I should unhesitatingly choose the latter. This "feeling for English" is a subtle sense, transcending psychological analysis, and leading those who possess it to use English with an appreciation of its genius. How, then, shall we develop in pupils this "feeling for English"? We may do this by giving them selections from the masters of English literature, and requiring that these selections be learned by heart, so that pupils may be able to repeat them and to transcribe them. In every grade, from the first year thru the eighth, certain standard poems, selected with reference to the emotional status and intellectual appreciation of the pupil, should be memorized—at the very least, half a dozen poems for each year. Children derive pleasure from learning and repeating the best literature, as it meets a natural want in satisfying their sense of rhythmic expression. They may not recall all this literature in later years, but it leaves behind it that subtle æsthetic sense of "feeling for English."

The selection of the pieces which are to be memorized involves a very large and a very important question, namely, their ethical import. But that is a question aside from the purpose of this paper. There should be, then, for each grade a certain number of poems which each pupil should memorize, and with such a degree of perfection that he could rise and repeat the poem, or take pen and paper and transcribe it correctly as to spelling, punctuation, capitals, and form. In the sixth, seventh, and eighth years pupils should be given an opportunity to choose from a small collection the poems they would prefer to memorize. For instance, if six poems were required of each pupil in any of these years, twelve or fifteen poems might be given to him to read and make his own selection from. The object of this plan is to provide for the child's individuality of choice, as influenced by his individuality of experience, and by his individuality of emotional tone.

But poems in themselves are not sufficient to develop this "feeling for English." Many of our courses of study furnish lists of poems that are to be memorized in the several grades, but I do not recall a course of study where excerpts of fine prose are required to be memorized. In the days of a generation ago this "feeling for English" was developed by those splendid selections of oratory which boys were required to memorize and speak at the rhetorical exercises then periodically held. We must not forget, in the multitude of newer things pressing upon our attention, all the good in the past. Hence there should be provided in each grade a number of prose selections suited to the understanding and capacity of the pupils, each a unit in itself, which pupils should memorize, so as to be able to repeat these orally or to transcribe them, as has been recommended with reference to the poems.

The third essential is that the formulation of the principles and usages of English composition shall come to the pupil by easy inference, after abundant exercise in the use of English, and not be forced upon him by definitions illustrated by a few formal examples.

What is needed is ability to use English well, and not principally an acquaintance with its formal aspects.

The regarding of the formularies of composition as the principal thing, and the inability to see the larger thing, the real thing, to which the formal statements must ever be secondary, is where the cause of our failure in teaching English lies.

Most text-books, official syllabi, and examinations emphasize the formal aspects of composition, instead of showing how they may be subordinated. The teacher is thus misled and her attention directed to these things as the end of her teaching, and so she comes to rest in the opinion that the ability of her pupils to set forth these things in examination is the test and proof of her success in teaching. My objection, you will recognize, is not a new one. These formal statements and examples to illustrate them become ends and are pursued as ends, and thus the teaching of composition becomes dry and barren of results.

The fundamental requisite, then, from first to last, in the teaching of English composition in the elementary school, is abundant and continued expression of the pupil's thought and feeling growing out of some activity, some experience, some observation, some intercourse, some imaginative construction on the part of the pupil.

What is to be insisted on, therefore, is some positive underlying content in the pupil's mind, which he is led to express either in oral or in written language; and out of this expression all the formal aspects of composition are to issue. The formularies are not to be omitted. They do not, however, lead the way, they are not important ends, but are subordinated to the real thing, the essential thing — something expressed.

Upon this expression as a basis we may teach the more obvious grammatical and rhetorical matters incidentally. In the lower grades many phases of capitalization and punctuation, the formation of plurals, possessive cases, the forms of comparison, correct forms of verbs, etc., etc., may be taught — the teacher shaping the composition exercises so that sufficient opportunities shall arise to reveal to the pupil the necessity for such knowledge, and also to give him sufficient practice in using it correctly. Dictation exercises may be employed as one means of giving practice in correct forms, but each piece so dictated should be some composition exercise which the class as a whole has criticised, corrected, and amended. Each pupil has then some special interest in it.

Letter writing, to be taken up toward the end of the third school year, will also afford another means toward the accomplishment of the ends just mentioned. Here, however, care must be exercised that there shall be content in the pupil's mind before he is required to compose a letter. Business letters first which are orders, then the replies to these; next may follow letters of inquiry, of direction, of application, of information, etc., thus gradually enlarging the scope to letters of friendship, invitation, acknowledgment, etc.

I have insisted, in all composition work, that there shall be content in the pupil's mind, when he is asked to compose; in other words, that bricks shall not be required without straw.

Fortunately, today, nature study and science work furnish something tangible and near at hand for the pupil to express. And so as much composition writing as possible should grow out of nature study and science work. Then there is also the history study, which may be used to this end.

While, however, the pupil easily finds something to say when required to write out his observations and knowledge gained from nature study or science work, we must not lose sight of the fact that, even with a great amount of such writing, he would remain deficient in skill and knowledge of certain important matters of English.

By such writing he learns to arrange his thoughts, to analyze more fully his general ideas; he enlarges his vocabulary, and he acquires facility in setting forth his thought.

But to lead the pupil thru this kind of composition to an appreciation of sequence and transition of thought as effected thru sentence construction, and to an appreciation of literary form and unity, would prove a most difficult undertaking, and to seek to accomplish this upon nature study and science composition would be to disregard mental economy. Mental economy points out a different plan.

The appreciation of literary form and unity, and of the various ways that language may be employed in securing sequence, transition, and connection of thought, is best and most easily attained by reading to pupils selections within their appreciation and understanding, and then calling for the reproduction of these, sometimes orally, but principally in writing, especially in the higher grades. Such reproduction exercises should begin in the third school year and be continued in each succeeding year. There is, however, one danger to be guarded against in this, and that is a haphazard and unskilled choice of selections. Here pedagogical insight is most requisite.

The use of the written reproduction will afford excellent opportunity for the careful treatment of the paragraph, not with reference to a definitive, formal statement of what the paragraph is, and the rules for the formation of paragraphs, but a knowledge of how to shape and constitute a paragraph in writing.

The next essential is a knowledge of grammatical analysis of sentences —this leading to a knowledge of the parts of speech and the grammatical rules for their collocation. Good English may be acquired without a knowledge of technical grammar, but there is no plan yet at hand to guide teachers in securing such a result. And were there one, a longer time would be needed. It would not be the way of economy in teaching. One who has a knowledge of the grammatical structure of language possesses many advantages over one who has not this knowledge, tho the latter may use English with a fair degree of correctness. I will not go into the educational value of the study of grammar. That alone would entitle it to a place in the elementary-school curriculum, even if it did not equip the pupil with knowledge directly available in the use of English.

The study of grammatical analysis may well be begun in the sixth school year, and carried on thru the seventh and eighth years. In this grammatical analysis it is far better not to put into the pupil's hands an elementary grammar with sentences selected from all the four winds of literature, and the remainder made to order — detached sentences which the pupil cannot relate to any piece of literature. Every sentence set before the pupil should be the expression of some thought he has before met in some literary production studied by him. Each sentence then relates to some whole which has stirred the pupil's feelings and given him new ideas and new experiences, and he recognizes what thought in that whole and what shading of that thought the sentence set before him serves to express. Every sentence he deals with tends, therefore, to draw after it some fraction of the tide of feeling aroused by the study of the literary production. The detached sentence carries no such substrate with it.

The first work in analysis might be based upon Longfellow's "Bell of Atri," an excellent selection for literary study in sixth-year classes. Sentences may be taken from this, and some sentences adapted. It is not necessary to begin with such absurdly simple and unattractive sentences as "Bells ring," "Dogs bark." The pupil can easily deal with sentences of some length, and can understand the office of a group of words amounting even to a clause, when used as a modifier, as easily as beginning with modifiers of one word. In other words, he may be led, as the principle of economy would suggest, to deal with sentences of usual length, as to subject and predicate; to deal almost at once with the three forms in which the modifier occurs, as word, phrase, or clause, and in the same manner with the direct object; and so gradually extending the analysis. The order is not the order of the text-books, but it is a pedagogical order.

The method to be employed in unfolding this grammatical knowledge is that of the skillful questioning of the living teacher. It is to be principally analytic rather than descriptive.

Now, while the knowledge of grammatical structure is growing, not upon detached sentences, but upon sentences taken from some literary whole that the pupils have studied, the rhetorical positions of the elements of a sentence may be treated. These two things, then, grammatical structure and rhetorical positions, may be closely interconnected, and the one made to aid the other. Side by side with grammatical analysis may be taken up variety of expression, as, for instance, the transforming of an infinitive to a participle, a participle to a clause, replacing the active form by the passive, an imperative mood by the conditional, a clause by an infinitive, and so on. Variety of sentence form may also be treated. All this is to find continued application in the composition exercises which go forward at the same time, making it all a living reality to the pupil.

As soon as the pupil's knowledge of the parts of speech and their modifications and relations will admit of it, I should bring him face to face with specimens of incorrect English to set right, giving the best reasons therefor that may be adduced.

The literature study in the seventh and eighth years upon such works as "Snow-bound," "Evangeline," "The Legend of Sleepy Hollow," "Rip Van Winkle," and "The Lay of the Last Minstrel," etc., may be closely interconnected with the composition writing, affording excellent opportunity for a simple study of diction.

I have insisted in this paper upon the actual use of English in writing, and a great deal of it, instead of study upon how English should be used, or how it may be used. Let me, in closing, add one qualification, and that is: at no point shall the teaching be such as to develop a fatal facility to use words at the expense of content of mind and definiteness of thought.

THE ESSENTIALS OF ENGLISH COMPOSITION TO BE TAUGHT IN SECONDARY SCHOOLS

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Unquestionably within the last few years there has been marked improvement in the teaching of English, both as to subject-matter and methods — as great progress, perhaps, as in any other department of college and school work; certainly as great as could reasonably have been expected under all the perplexing circumstances that necessarily attend the introduction and systematizing of a new teaching subject.

And yet, it must be admitted by all thoughtful observers that there still remains much to be desired in the work of this great department of education. Certainly, judged by the test of results, that is, by the practical skill attained by the average student in the use of his native tongue, something is radically wrong in the system of instruction now given. Anyone who is familiar with the English composition of hundreds of young men applying for admission to college well knows that there is immense room for improvement. The reports of the Harvard Committee on Composition and Rhetoric are an epitome of the college-entrance examinations thruout the land — that is, so far as bad English is concerned.

It is difficult to believe, at times, that many of the writers of college-entrance papers are English-speaking boys. In the most mechanical points of execution — in hand-writing, spelling, punctuation — a large number are deficient to an appalling degree. They have no vocabulary; words do not appeal to them, or have for them the least significance Any strength of thought or vividness of feeling that may occasionally struggle for utterance finds but one vent — slang. Unity or coherence of thought is seldom exhibited. Long chains of unrelated ideas are tacked together in a slack-rope sentence, pages long, with a lot of "ands," when a lot of "buts" would be equally exact. Paragraphing is seldom attempted, unless after the fashion of one student who systematically indented the lines in blocks of five. And, worst of all, there is rarely to be found evidence of power of thought or range of reading, such as one ought reasonably to expect in young men of seventeen or eighteen, who regard themselves as ready for college work.

But that tale we all know. The vital question for us to consider is: How comes it that school life has passed over these youths and accomplished so little toward improving their taste or affording them any skill or ease in the use of their mother tongue? Can the matter be remedied, and if so, what is the remedy?

Truly, these young men are often intelligent and industrious; the teachers faithful and diligent, and, not infrequently, accomplished English scholars; the cardinal fault, in so far as the secondary schools are responsible for the miserable preparation in English, being the fault, I take it, of subject and method; the fault of the manner in which English is taught.

I say so far as the secondary schools are responsible; for, while I would not shift from them their due weight of obligation, in the premise, it should ever be borne in mind that they occupy a peculiar position in the scheme of education. That position is a relative one, and the answer to the question as to what essentials of composition, or any other subject, are to be taught by them can receive only a relative answer. The secondary school takes such grist as is offered from the elementary school below, and must, in the main, grind it into those brands demanded by the college above. As to this latter demand, I am firmly of the opinion that one of the greatest injuries wrought to the thoroness and efficiency of all high-school and academy work is the needless multiplication of studies required for admission to college. It is a well-established psychological truth that content varies inversely as the extent; which is another way of saying: The more you spread your butter—educationally speaking—the thinner it will be.

On the other side, the influence exerted by the eight-years' training in the elementary grades cannot be easily overstated. In the struggle for a better English the elementary school is the strategic point; and unless effective work is accomplished here, the effort for improvement in the higher grades, tho not necessarily futile, will be rendered immensely more difficult. By thirteen or fourteen years of age the speech of the pupil is well-nigh crystallized. Ungrammatical expressions, faulty spelling, defective or vicious taste that characterize the pupil at this age will generally stick, like the shirt of Nessus, thru life.

Until very recently two distinct methods have been pursued in the effort to inculcate a good English style. The first method—the translation of the ancient classics—has long been regarded, and by many is yet regarded, as the open door to our mother tongue. As a matter of experience, it has been generally true with me that the students of the classics have been the best English scholars. The exercise of translation from languages so logical and severe as Greek and Latin may afford a most excellent training in English composition. But the main defect of this method, as has been frequently pointed out, is that the student is confronted with a twofold difficulty; he is attempting to interpret a language of which he knows little into another language of which he knows only a trifle more. Too often the result is an English that never was on sea or land, i. e., "that lazy, mongrel English—'translation English.'" And, surely, the average boy gets none of the subtle aroma of the classics as literature, "bottled up" as it is to him behind inflectional endings, subjunctive moods, and paradigms.

However, much benefit to the students' English may be accomplished by requiring oral translation into smooth, idiomatic English; while a still greater degree of benefit may be had from the practice of making a correct *written* translation of at least a portion of each recitation. The work may be slow, but quality is certainly to be preferred to quantity. Education does not consist in galloping over so many square acres of printed matter.

The second method of learning to write English consists in the fruitless practice of studying *about* English rather than studying English itself; elaborating the whys and hows and wherefores of style, but never putting into practice the fine-spun theories that are so painfully swallowed and that are never digested. From the examination of the schedule of studies in a large number of secondary schools (especially rural and village schools) I am confident that a vast deal of energy and faithful teaching in English is utterly spoiled by the worthlessness, from the practical standpoint, of the subjects taught; a great part of the work done being but little more pertinent to developing the effective use of English than is the work of any other department in the school curriculum. Much too often the subject is taught as a science and not as an art. Theoretical grammar and rhetoric are the staple subjects, and what, I ask, are grammar and rhetoric but metaphysics applied to language and style? As disciplinary-subjects, as whetstones for the mind, they are not to be surpassed, taking rank with mathematics, logic, or the severest of the exact sciences. But their method is conscious analysis, the method of science and not of art. "Formal grammar and rhetoric," says Professor Hinsdale, "should play no part in the early stages of composition teaching." Certainly, many of the world's most vivid and vigorous writers have known but little of phonics, inflections, and syntactical systems, not to mention coherence, mass, and the æsthetics of style. They knew how to use the tools, tho they knew not their names. On the other hand, I am confident that there are hundreds of thousands of people all over this land today who had the possibilities of becoming fairly easy and graceful writers of their native vernacular; but alas! the tender motions of whose young pens were paralyzed by this grammatico-metaphysical specter of the schoolroom.

What is needed, then, in our entire school work in teaching composition is less psychology and more practice; more of the method of the gymnasium, of the studio, and of the laboratory; i. e., the method of learning to do a thing by doing it.

As one learns to talk by talking, to walk by walking, to dance by dancing, so one must learn to write by writing. Is skill at tennis, for instance, or at baseball, or at any sport, acquired by mere study of rules? Rather, is it not acquired by watching the game and taking a hand? Is one to learn to swim by locking himself up in a room with a bowl of water, and wrangling over the anatomy of the human body in all of the ponderous nomenclature of physiology, together with the principles of hydrostatics and the properties of floating bodies? Well, equally absurd, it seems to me, is the effort to learn the practical use of English solely by the processes of grammatical analysis, and the classifying of the *disjecta membra* of style. Doubtless, were we to practice talking as little as we do writing, we should be as clumsy with our tongues as we are now with our pens. Our experience in learning foreign languages is much to the point. For instance, after an hour a day for a year or two in Fasquelle, what is the ability, even of the most intelligent man, to write a French letter or to chatter with a Parisian cabman?

Moreover, of all the arts, that of writing well is certainly the most difficult. Fluency and good style are not a fairy gift, but are obtained only by the most strenuous labor. In praise of the art of the world's greatest literary genius it was written:

> "Who thinks to write a living line must sweat
> . . . . and strike the second heat
> Upon the Muse's anvil,
> Or for the laurel he may gain a scorn,
> For a great poet is *made* as well as born."

A most excellent legend, this is, to hang in the department of English composition.

But even practice in writing fails of the best results, unless attended by another important factor that is recognized as an essential element in all good work. I mean interest. An essential which, if it cannot be taught, can at least be cultivated. Mere writing for the sake of style soon becomes irksome to the average boy. He has not yet arrived at that high state of development that enjoys art for art's sake. Certainly, without interest in one's essay—in the subject as well as in the expression—there can be no fluency, no spontaneity of utterance. "No man or boy," says

Professor Carpenter, "can write well, unless he writes for the purpose of expressing thought." One must have something to say, and want to say it, before he can say it — that is, with expressiveness. "It is a notorious fact," it has been said, "that the dullest and stupidest and most muddle-headed girls and young men, who are apparently incapable of expression, will once in their lives write well. They can each and all write a good love letter. If a man or a maid is really in love, and not shamming, he or she will be sure to write well. The reason is plain: for once in their lives they have something to say." Now, often the great difficulty with very many young people in composition work is that they are set to write on themes of which they are entirely ignorant. They are expected, as it were, to draw water out of a dry well, or, like the spider, weave a web out of the inner self. Such subjects as "Spring," "Birds," "Flowers" are possibly suggested, and the youngster is expected to produce some sentimental, milk-and-water reflections suitable to the theme; or, maybe, he is invited to present his mature and practical views on "Success for the Brave," or "The Dangers that Threaten the Republic," or "The Silver Question," or some other equally arid abstraction. The boy knowing nothing and caring nothing about these things, the outcome is a failure, and a feeling of abiding disgust for composition as an accomplishment fit only for a literary dude. To get the best results, the pupil should never be assigned abstract subjects, but rather should be assigned the subject in regard to which he knows the most and feels the keenest interest. Concrete, live subjects of everyday experience — games, athletic contests, school exercises or incidents; scenes, characters, and plots of books read — subjects such as these provoke a young person's enthusiasm, and will, therefore, call forth all the resources of his vocabulary. The subject should never be allowed to assume the form of a vague generality that embraces the earth, but should be severely narrowed to one point of view. This practice is much the most suggestive of accurate thought. The composition should be brief, and at least one should be written each day thruout the first half of the period of secondary work. And this can be accomplished without adding unduly to the "mule work" of drudgery with which the teacher of composition is already sorely burdened.

The written recitation offers a fruitful field for composition work. The incidental or co-operative method of teaching the writing of English will doubtless grow in favor with the schools, and, when properly systematized and adjusted, will be, I think, the solution of the English problem. In my estimation it is the method *par excellence;* indeed, without it I do not believe that the standard of English in any secondary school can be materially elevated.

The teacher of English alone can accomplish but little in one hour toward resisting the practice of bad English in every department of school work. In an institution in which I am acquainted written monthly reviews are required, and it is astonishing what readiness in writing frequently results from the practice, even with boys of ordinary capacity.

To sum up, the first aim of secondary-school work in composition, as I see it, is to develop fluency of expression in the pupil; to teach him to write as he talks; to aid him in overcoming that sense of artificiality inhering in the art of writing; and to bring him unconsciously and gradually, by familiar practice, into an easy and natural command of his pen that will enable him to put to ready use whatever stores of words and ideas he may possess.

Now, next, when the pupil's freedom of utterance becomes somewhat securely established, criticism of his technique should become more rigid; tho correction should never be nagging, or merely tearing crude, immature work to tatters. As far as possible, the work should be done in the class-room, together with the class. Only a few simple, practical rules and principles, however, need to be taught, but the gospel of thoroness, it seems to me, should obtain in regard to these. From the first, spelling, punctuation, and capitals should be insistently emphasized, and the greatest possible accuracy secured in their use. While certain vagaries in spelling are compatible with vigor of expression, and while punctuation is a very delicate and difficult art, yet they are integral parts of composition, and flagrant violations of them indicate a slovenly habit of mind. You have doubtless heard of the A. B. who had to take a postgraduate course in spelling. I once knew a teacher who applied for an increase in salary, but failed to secure it solely because he spelled salary "salery." Letter writing, solecisms, clearness and unity of sentence structure, the paragraph, the essay, the different types of prose composition, and figures of speech seem to me the other salient elements of style that should be attempted in high-school work. As will be seen, these elements enumerated are chiefly mechanical and intellectual, properties of style that can be learned by any pupil of fair intelligence. Leave severely alone the elements of force and elegance. They depend almost entirely upon native aptitude and bent of mind; or are gradually and unconsciously developed with the growth of the pupil's mind. Generally it may be remarked that in this work of criticism the young student should not be confused with a multitude of nice details that are mooted points even with critics—e. g., the split infinitive; but preferably his attention should be directed to the common errors of everyday occurrence in the school and on the playground, or in his own themes. The principles of the paragraph should be taught with much greater care than is usual in the ordinary schools. A great many pupils are left in the state of mind of the boy who defined the paragraph as a "gob" of sentences. The paragraph is the essay in miniature, and illustrates, in little, all the structural elements of a complete composition. Its brevity recommends it as the norm of all early composition work. Facility in paragraph analysis is indispensable for that wider mental view which is necessary for the grasp of the general significance and structure of a piece of composition.

For the sake of systematic and continuous presentation, it were best that this small body of simple precepts should be codified in book form. It would be a very thin volume.

Tho the Committee of Ten recommends to the contrary, to my thinking the study of words should be pursued as an independent study. Much has been accomplished for a boy's linguistic training when a tender conscience for words has been awakened. Pottering about words may not always give a good style, but without this pottering there can be no good style. It is not etymology, or the history of words, or the inflection and composition as ends in themselves for which we should care, but rather as means for developing in the young student's mind an abiding, joyous sense of the delicate shades, the phantom-like suggestiveness, the haunting melody of these little elements of that matchless medium of human thought, our own English tongue. As a rule, words are ideas; precision of word and precision of thought are practically interchangeable terms. I once knew a student who, instead of the dictated sentence, "An opossum is an animal with a prehensile tail," wrote somewhat irreverently, "An apostle is an animal with a pencil tail;" while "The synod was held in South Carolina" came out, "The sinner was helled in South Carolina." The Harvard Committee records the instance of one boy who wrote of the story of the three "caskets" in "The Merchant of Venice" as the story of the three "coffins." And so for many their native English is well-nigh an unknown tongue, and knowledge, therefore, is to them a book that is forever sealed.

Trench, and a good work on synonyms might be used; and the pupil should learn "to trot to the dictionary whenever the propriety of a word is broached." Says Oliver Wendell Holmes: "When I feel inclined to read poetry, I take down my dictionary. The poetry of words is quite as beautiful as that of sentences." Thackeray frankly confessed to a practice of studying the dictionary in order to improve his vocabulary. Especial pains should be taken to cultivate an abhorrence of the use of grandiloquent language, as "steed" for "horse," "the devouring element" for "fire," "purchase" for "buy," "welkin" for "sky," and the rest of the list. The habit finds its roots in mental pretense or downright dishonesty. On the other hand, we should cultivate, or at least tolerate, graphic idioms, and even provincialisms, if expressive. Perhaps, tho, the line should be drawn at "Where am I at," and "I want that you should do it."

Like all arts, the art of composition is largely mimetic, and all good writers testify to the powerful influence exerted upon their style by an intimate acquaintance with good models. And so the concurrent course of literature in high schools may, if properly taught, be made to contribute richly to the pupil's powers of writing. Indeed, someone has forcibly said that grammars and rhetoric, without literature itself, are ships of war with the guns thrown overboard; a feast of husks and rinds peeled from the rich fruit that seems to be as inexorably forbidden by some teachers as were the apples of Eden.

In committing strong and beautiful passages to memory, words, sentences, and ideas are absorbed that pass into the very warp and woof of one's thought and language. The old practice of declamation is of great value as a means for increasing the pupil's vocabulary.

Paraphrasing, too, is useful, tho it does lead into grotesque mutilations of the originals. Matthew Arnold was perhaps justly horrified at the transformation by a pupil of "Canst thou minister to a mind diseased?" into "Can you give medicine to an invalid lunatic?" The main object of paraphrase, however, is not to better nor to equal the original, but to test and develop a student's own power of expression.

The principles of structure and the making of outlines can be best taught in the study of concrete examples of literature, and here, too, can be best explained the different types of prose and poetry. Some of the selections in the usual required course of high-school study seem to me illy adapted to the intelligence of the average pupil. Lycidas, for instance, is for many boys very enigmatical reading, while the majesty and sweep of Burke's great oration are far beyond their grasp. Moreover, there are needed in many cases a simpler method and a more practical aim in the presentation of English literature. If genuine good is to result to the pupil's style from the course in literature, the teachers of secondary English must adopt more the methods of their coworkers in Latin, Greek, French, and German; there must be less of vague appreciations of æsthetics, and dreamings of authorship, and more close work on language and form. The lesson in literature need not sink into a lesson in parsing and second-hand philology, but the casket of literature opens its rich and glorious treasures only to the key of accurate scholarship.

Success in any department of school work, we know, is largely dependent upon the teacher himself. But to a peculiar degree, it seems to me, is this true in regard to the teaching of English. The instructor, to be sure, need not be a prodigy of parts, breathed upon from the shrine of the Muses; he need not even be one who could gain a livelihood with his pen; but he should at least be an accurate scholar, and a model in the practice as well as an instructor in the theory of good English. All the grammars and rhetorics in Christendom cannot impart a correct use of English, if, unfortunately, the teacher himself be addicted to slipshod and ungrammatical English. Bad English is as infectious as yellow fever, and there are no immunes.

One of the chief obstacles to securing a more effective use of English is, I greatly fear, the indifference to that skill on the part of many teachers, especially in our rural schools. Beyond question, this indifference prevails widely with parents and pupils. Like Dogberry of old, the average American citizen thinks that reading and writing came by nature, and that if one has anything to say he can say it, and that any way of saying it will do.

Practical subjects are the popular ones. Something that will pay — arithmetic, for instance, tho many people fail to put to very wide use their knowledge of interest, and bank discount, and cube root. As a matter of fact, there is no more practical art than that of composition, the ability to express oneself in clear, forcible language. It is of daily use with everyone. It is a distinct aid to the pupil in all of his educational work, and offers a true index to his progress, for only what he can express can in any true sense be called his ; while in active business life, in scientific and technical pursuits, as well as in the learned professions, that man enjoys a distinct advantage who commands a facile use of language, who can with his pen present the matter in hand in an orderly, perspicuous, convincing manner. The great apostle of good English, President Eliot of Harvard, truly says that only he that can speak and write his own language can be called an educated man.

Now, the development of this great and desirable power must be largely the work of the elementary and secondary schools. Here is the place to learn to speak and write correctly. A better higher English is impossible without a good lower English.

Unless pupils have been thoroly and properly grounded in all the minute details of elementary language and composition work, fine-sounding college courses will be so much waste paper, and teaching, however enthusiastic and laborious, will be as firing in the air, or beating a bag of feathers.

There is but little real good to be achieved in polishing and tinkering the apex of a pyramid, if the base is laid in slipping sand.

DISCUSSION

F. S. HAFFORD, superintendent of schools, Prescott, Ariz. — I have a very pleasant memory of a little country school in the backwoods of Ohio, where I was a boy teacher. One afternoon in February, when the spring sun was melting the winter snows, my school had spent an hour in a maple grove watching the boiling of sap and the making of maple syrup into sugar. On our return to the schoolroom the question was put: "What shall we have for a pleasant occupation this Friday afternoon ?" To my surprise I heard an almost unanimous exclamation : "Let us write compositions, and tell how maple syrup and maple sugar are made." I never had seen a composition exercise in my own school days. My pupils had seen but one — a crude attempt that we had made a month or two previous. At that time I was inclined to think that their request reflected credit on my work as a teacher, but I have long since abandoned that idea. I had only found them in a natural state, not spoiled by wrong methods of teaching.

We wrote the compositions and read them; then some good genius suggested that I ask them to make me as perfect copies as they could, for I should like to preserve them. Now came the opportunity for suggesting a change of punctuation here, a capital there, a division of this sentence, a paragraph here, etc., until each pupil had produced as perfect a copy as he was able. The original copies, then, without any mutilation whatever, were decently buried in the waste basket, and the mourners were soon comforted.

Ah! those sweet little essays, all dripping with maple syrup and sticky with great lumps of maple sugar. I believe I still have them preserved in some old box in the garret, for I am keeping the promise made to the children. They are of no value as literature; I never told the children that they were of any value as literature, but the fact that they were of some value to somebody, for some reason, was of infinite value to them in encouraging them to further efforts in writing.

We love to call our little one, when she is learning to talk, the prattler, the chatterbox. Her crude efforts at speech, her baby words and quaint phrases are very entertaining. We parents sometimes set her strange examples. We speak to her in a different key, in distorted sentences and ungrammatical expressions, thinking she will learn English easier by imitating these. We teachers do not do such things; I am only making a confession for parents. Of course, the child does not imitate us. We sometimes repeat her first crude efforts, and perhaps flatter ourselves that we have taught them to her; but the child, on hearing us or others using more correct forms of speech, soon lays aside the baby expressions in spite of us.

On the other hand, when we first attempt to teach children the written speech, we set for them models of excellence which we ourselves may be unable to imitate, and unsparingly criticise their efforts and ridicule their failures. I may be asked: "Would you set before a child who is first learning to write examples of misspelled words and distorted letters and ungrammatical expressions?" I answer, it might be better to do even so than to pass upon their crude attempts such severe criticisms as will tend to deter them from making further efforts. I have in mind another scene, of which I am not so proud. I overheard two girls discussing their essays, which had been returned to them after passing under my red-ink pen. One said to the other: "Did yours catch the scarlet fever today, or did it get off with an attack of the measles?" Then I took my lesson in pedagogy. It is a principle of international law that the victorious warrior must not mutilate the dead bodies of the fallen foe. It ought to make one number in every teacher's decalogue: Thou shalt not mutilate the warm and living creations of the children's fancy.

One other essential of English composition that it seems to me should be emphasized is, that every child should be taught an uncompromising regard for truth. One sentence of his own ideas, his own opinions, or his own fancies is worth whole pages of foolscap of quotations, extracts, paraphrases, or plagiarisms. He should never forget to love the story and to revere the memory of him who "did it with his little hatchet."

AMERICAN UNIVERSITIES AND THE NATIONAL LIFE

BY PRESIDENT ANDREW S. DRAPER, LL.D., OF THE UNIVERSITY OF ILLINOIS

Mr. President, and Ladies and Gentlemen:

The natural world is in unceasing, universal, rhythmic, periodic motion Matter moves in circles, and there is some reason to suppose that the succeeding circles are upon continually advancing planes.

It is so with thought. The advanced and sustained thought of the world may easily be marked off into cycles, and the succeeding cycles show wider scope, greater power, larger freedom, and more rational reasoning; and they are laid off upon higher and yet higher planes of intellectual progress.

What is is the child of what has been and, in turn, becomes the parent of what is to be. Like begets like, but the qualities of the parent are intensified in the offspring. It is so in nature, and it is so in thought. Institutions are the concrete products of common thought. They advance as rational thought moves forward, and, in turn, they react upon the thought of the multitude to make it more virile, more logical, more free.

The educational institutions of a people measure its progress. They are at the point where the lines of its history converge, and they contain the elements which will determine its destiny. And among a people where thought is free, where the representatives of the people exercise the sovereign power and set up institutions at their pleasure for the good of all, the worth of educational institutions is measured by the grade and the scope of the most advanced of them. The elementary schools are not the forerunners and the supporters of the advanced schools, but the institutions which are disciplining the world's thought and contributing to the sum of the world's knowledge must provide the teachers who will stimulate the activities and initiate the work which will add to the accomplishments of the schools below. If the destiny of a self-governing people is to be ultimately determined by its public educational system, it is to be essentially determined by its colleges and its universities; for these above all others of its creations will point out the high-water mark of its thought, and give force and direction and scope to its energies in the succeeding years. So believing, we may call up the history of our colleges and universities with pride, we may witness their wonderful development in the present generation with great satisfaction, and look for their influences in the coming years with high confidence.

THE ORIGIN OF UNIVERSITIES

The influences were many, and widely different, which produced universities in the old world. Students followed the footsteps and hung upon the words of great teachers, and where the leader paused, there the students gathered, and a university resulted. The monasteries gave the initiative to universities, and so did the old-time learned professions. Religious sects set up universities to propagate their creeds; monarchs created them to fortify their thrones and oppress the masses; and, in turn, with the advance of democracy in government, the people established them in celebration of their victories over the kings.

AMERICAN COLONIAL UNIVERSITIES

The earlier American colleges sprung from the purposes of the colonists, and were projected upon the lines already laid down in the mother country. The earlier educational system of New England was very like the educational system of old England. The colony of Massachusetts, following naturally the very common theories and sympathies of that great party in English politics and in the English church with which her people were allied, founded Harvard College to promote the ideals of the Puritan theocratic state and the Puritan governmental church in New England. Those ideals were exalted, but they were narrow in that they were not democratic. Political and religious, rather than educational, differences put the people of Massachusetts at odds with the person and the party of the English king. These differences produced a colonial college, but, so far as the plans and purposes of that college were concerned, it might as well have been set up in old England as in New England. If the relations of Massachusetts with the king were a little strained, the people of Virginia needed no introduction to the English court. If Harvard was the representative of the Puritan, William and Mary was of the cavalier. It had a royal charter. It was well endowed by the crown. It sympathized with the king's party in English politics. It wore vestments. Its professors subscribed to the "thirty-nine articles," and it stood for the idealism and the extreme ceremonialism of the conformists in the English church. Of course, if colleges were to be instruments for the propagation of creeds, then the nonconformists as well as the conformists must have colleges. Yale was set up by Connecticut and the Congregational or Independent church; Princeton by New Jersey and the Presbyterians; Columbia was opened in the interests of the nobility and with the purpose avowed of preventing the spread of republican ideas, which, by the middle of the eighteenth century, it was said, had become far too common in the colony of New York. Of course, its name was not then Columbia, but "Kings." Of the four other institutions established in the colonial days, and which have since grown into colleges or universities, Pennsylvania stood for the Quakers, Queens (Rutgers) gave sustenance to the Reformed (Dutch) church, Brown to the Baptists, and Dartmouth to the Congregationalists. It is seldom recalled now that the latter was prevented from becoming a state university in name and fact by the pleadings of Webster and the elaborate opinion of Marshall in the famous charter suit. All these institutions were, at the beginning, state colleges, but, of course, in no such sense as attaches to the term now.

Nearly all of these colonial colleges had behind them, in some measure, and ordinarily in combination, the three influences which have given the initiative to substantially all of our American colleges, viz.: ecclesiastical zeal, governmental authority and support, and private benevolence.

They have, most of them, drifted from their original moorings, because they found it necessary to do so in order to be of service to a wider constituency. They were established at a time when the accepted theories required the state to *encourage*, but not to assure, the facilities for education, and they have for the most part, and very naturally, become independent of government aid. Save in one conspicuous instance, they have generally maintained their religious alliances. In that instance the ideals were so narrow and the proceedings so strained that advancing thought revolted. All have become more and more dependent upon private benefactions, and, as wealth has been increased and their children have multiplied, these have been so generous as to enable the most of them to enjoy large prosperity, and some of them to develop into leading American universities.

These universities, whose origin goes back to the colonial days, for what they stand and for the influences which they have exerted, must always hold a warm place in the gratitude of the nation. They spoke the nation into independence, and have been the centers of our national culture in mind and spirit from the beginning of the national career. Their graduates were the inspiration of the revolution and the framers of the most remarkable scheme in democratic government that the intelligence and courage of the world have produced. The spirit of the minute man at Lexington, the spirit of the continental congress, and the wisdom of the first constitutional convention came from the men of the colonial colleges. From the revolutionary days till now their sons have inspired and limited and directed the nation in the years of its greatest growth and severest trials. It is a satisfaction to know that in nearly every case their own prosperity has kept pace with the national progress, and that their future is as bright as their work has been elevating and far-reaching.

COLLEGES OF THE NATIONAL PERIOD

National independence ushered in an educational revival, and very soon there resulted a prolific crop of new colleges. For a hundred years the number has been augmenting. Far oftener than otherwise they have been set up to advance the work of the religious denominations. The most complete list of which I know shows 415 institutions in the United States claiming college or university grade. Of these upward of forty are distinctly state institutions. Of the 375 remaining about 275 publicly declare that they are under denominational control, and doubtless the greater number of the rest are really so. If it should be learned in certain quarters that some—like Oberlin, Beloit, Hamilton, Amherst, and Princeton—thought they were not so, their condition of mind would surely call forth the prayers of the church and congregation, and it may well be surmised that early steps would be taken to bring them to a realization of some things which it would be deemed important for them to know. With the exception of Princeton, which certainly has gained it, the best of these institutions lay no claim to university standing, altho some of the poorer of them frequently do. While a few institutions of high grade and without sectarian leanings have recently come into considerable prominence thru their wealth and the munificence of benefactors, the fact unquestionably is that outside of the state universities the overwhelming number of American institutions of advanced learning have resulted from the efficiency of church organizations and the penetrating power of religious thought.

THE DENOMINATIONAL COLLEGES

These denominational or Christian colleges, as they are called, have been a very potent factor in advancing higher education. They have been well adapted to pioneer conditions and have been effective educational pioneers. Some have had sufficient support to enable them to meet the needs of wider constituencies and older communities. The strongest of them have dropped, or assumed to drop, their denominational characters in order to attract students from outside of their denomination. But very commonly their endowments have been inadequate, and as the educational advantages about them have become enlarged and improved, they have been unable to keep abreast of the progress of educational events. Many are languishing, and the lights of some have gone out.

The question as to what is to become of the denominational colleges is much thought of and frequently discussed. It is impossible to consider it with any thoroness here. It seems clear to me that they must stand or fall upon their merits, and upon their merits from the standpoint of higher education rather than from the standpoint of sectarianism. Everyone wishes them well. But the trend of progress is inexorable. The standards of higher education in this country are going to advance and become more firmly fixed. The time is rapidly coming—in some parts it has now come—when no one can lower those standards or hinder their advance without being discredited. A weak college on a private foundation ought not to stand in the way of a good public high school. On the other hand, I have no thought that the high school is to become the college of the future. At least until the time when our territory is very much more thickly settled than now, there is reason to believe that the high schools will do less advanced rather than more advanced work than they are now trying to do. The colleges need have no fear of being without a field or of being robbed of their opportunities. They may do a work which the sentiments of average communities will not support the high schools in doing, and which it is either not practicable for the universities to do or which large numbers of students cannot go to the universities to secure. The colleges which are able to adjust themselves to the new conditions and occupy this field will continue to be supported; such as pretend to hold university grade, and such as rest their claims to support wholly or mainly upon sectarian grounds, will go the way the old-line academies in the eastern states have gone; for differences in creeds are not sufficient bases for systems of education equal to the support of free institutions, and the people of this country have deliberately determined that there shall be a general system of education in America, commencing at the bottom and reaching to the top, to which every son and daughter of the people shall have free access, without regard to the religious, political, or social differences of their fathers.

THE STATE UNIVERSITIES

The founding of state universities was a distinct advance in American education. It has become the most significant educational movement of the last half century. It came when the mind of the nation began to realize that self-governing states did not exist for security or for fighting power alone, but for the intellectual and moral progress of their citizens; that the opportunity to make the most of himself was the inherited right of every child of the republic; that education was a matter of public even more than of private concern; that it was a function of the state, not merely to encourage, but to *insure* the best educational facilities which the world's experience had evolved; that the college and university were legitimate parts of the public educational system; and that it was incumbent upon the state to commit the leadership of its educational work to universities supported and controlled by the people. To that great movement, which has already supplied by far the larger number of leading universities to the country, I am justified in giving considerable space.

These universities rest upon stable foundations. Most of them have had the advantage of the land-grant acts; and their perpetual support by the states is a matter of inviolable contract between the nation and the individual states. No state could break the contract if it would, and certainly none would desire to do so. The state universities have their roots in the constitutions of many of the states, and these have been adopted by the people and can be changed only by the people. Better even than that — they are a part of the policy and the history of their states. They have shared in the public lands of the states; many have a special state-tax levy. They constitute a very important part of the free-school systems of their states; they are articulated with the secondary and elementary public schools as no other higher institutions of learning ever can be. Their graduates are scattered over their states, are apostles of higher education upon a free basis, and are already numerous and influential in the public life of their states. The people believe in them; they have invested in them; they have done it with deliberation, to the end that their children and their grandchildren may have the benefit, and their state the security and the glory, of it. In a word, the state universities are as stable as the states themselves, and infinitely more so than any institution upon private or ecclesiastical foundation can ever hope to be. Of course, the whims of new legislators in their freshman year will cause a little commotion now and then; but criticism upon a state university is only helpful, and a move to abolish such an institution would start as much fun as a motion to annul the constitution and go back to a nomadic life.

In characteristics the state universities are much alike. They have had similar origins, and their hearts have been stirred by the same enthusiastic, warm-hearted constituencies; they have all been under about the same influences, and they have all aimed at substantially the same ideals. They have been moving along the same lines, and with a force and rapidity which are unprecedented. Many of them are farther along than Harvard was after 225 years and up to the time of President Eliot. There are not ten other institutions in America doing work of as much diversity and as high grade as twenty of these state universities are doing. Forty of them have 2,700 instructors, 33,000 students, 60,000 graduates, $22,000,000 of productive funds, and annual incomes aggregating $6,000,000. Ten of them have 175 buildings, 1,800 instructors, and 18,000 students in collegiate and professional courses. Their entrance requirements are on a level with those of Yale. Taking their literary, scientific, engineering, and agricultural lines together with their work in the fine arts, with their schools of medicine and of law, and their graduate schools, and their articulated relations with the public schools of their states, and their university extension work — and surely they are coming to be well abreast of, and in some ways have a great advantage over, the half dozen leading universities of the East; and outside of these there are none to be compared to them in resources and in multiplicity and character of work.

CLASSIFICATION OF UNIVERSITIES.

American colleges and universities may be separated, so far as origin is concerned, into three classes, viz.: (1) ecclesiastical institutions; (2) privately endowed institutions, which are frequently, but not always, of the first class also; (3) state institutions. So far as aim and purpose are concerned, they may perhaps be placed in two classes: (1) institutions which nourish learning, in order that it may promote a cherished and ordinarily a righteous cause; (2) institutions which extend learning for learning's sake, follow its lead, no matter what interest it supports, and love it because they know it contributes to the liberation of God's infinite truth. The English universities have been very representative of the former class, and all of the earlier American institutions have very naturally followed the English thought and copied the English plans. That thought was right, so far as it went; but it was illiberal, for it was the thought of the aristocracy; those plans were well, so far as they were matured; but they were incomplete, for they were lacking in provision for the poor, and made no attempt to carry the higher learning into the life and the vocations of the millions. And they were accordingly unequal to the support of American institutions.

THE SPIRIT OF THE NATION

The spirit of a nation fixes the character of its schools. Before the Civil War some of the states had begun the development of state universities. In the very darkest days of the fratricidal conflict, when filled with anxiety and bowed down with anguish, the nation entered upon the general policy of carrying the higher learning into the homes and fields and workshops, as well as into the offices and the pulpits, of the people. It was a great step in the complete evolution of the American public-school system. It supplied a unique educational system with a unique and inspiring crown.

ADAPTING UNIVERSITY PLANS TO AMERICAN NEEDS

The new movement adopted the different features of the older institutions, so far as they were adaptable to American life and American needs, and rejected the rest. What was then lacking it supplied. It took the culturing work of the English scheme and discarded its illiberality. It seized the spirit of scientific research, the methods of instruction thru doing, and the love of universal learning so characteristic of the Germans; but it refused their administrative and official indifference to the habits of life and the ethical worth of their students. Realizing that the one system labored for the man more than for the student, and that the other system labored for the student more than for the man, it selected the elements of both which could be utilized for the highest development of the man and the student in the same person. It took as the cornerstone of its foundations the sound pedagogic principle that intellectual virility, moral heroism, and industrial skill combine in the evolution of the deepest student and the strongest man, and are natural yoke-fellows in a democratic state. It not only came to the help of the people, but, as it was designed to do, it soon began to assert itself in the affairs of the state. It put away all intolerance of religious opinion; it welcomed woman; it began to energize and uplift the common schools below it; it ushered in a new era in educational thought; it did it by sovereign authority; it broke out new roads with majestic tread; it began to supply instruction of higher grade to every applicant who came prepared for it, in whatever studies he desired to pursue. And it did it all at a minimum of cost.

It goes without saying that this mighty movement has had a telling influence upon the great states west of the Ohio. And what a change this new upbuilding in the West has produced in the East! Harvard and Yale and Princeton and Columbia entered upon the elective system and undertook to stop purely dogmatic assertion and catechetical instruction. Of course, they think they did it upon their own motion ; indeed, they sometimes say that they invented the new plans. It is a self-satisfying and harmless delusion. The new plans came directly from a versatile and vigorous people. The oldest eastern universities changed their plans, after the University of Michigan had led the way, and under the influences of the fresh breezes which began to blow from the prairies and the mountains of the north central states. Others followed in their wake, as far as the conditions and traditions would allow. New institutions copied, as far as funds would permit. Some have languished under changed and inevitable circumstances, to which they were either unable or unwilling to adjust themselves. The result is a revolution in educational processes almost complete.

REACHING THE HOMES

It was the original intention that this movement should bring the higher learning to the very hearthstones of the common people, and it is doing so. The road from the primary school up to the university is continuous and easy. Many have already passed over that road. A very much greater number will follow it, for in every comfortable western home the boys and girls of high-school age are thinking about going to college. What they are seeing and hearing is firing them with the zeal for learning and for conquest. Of course, it brings together a freshman class lacking some of the graces of dancing masters and some of the diplomacy of corporation managers; but it gathers one which brings good, rich, new blood to the aristocracy of learning, which soon finds the point of equipoise between the field and the shop, on the one hand, and the swallow-tailed coat, on the other, without being afraid of either, and which certainly is not lacking in the qualities which are most capable of attaining the stability and the progress of the nation.

THE CURRICULUM

If the cosmopolitan and democratic policy of the student body is a feature of the state universities, the breadth of their foundations and the multiplicity of their courses, with the largest liberty of selection, are no less so. The central thought of the congressional legislation to which the most of them owe their origin, tho not the greater part of their support, is that the industries of the nation shall be lifted up to the plane of the professions, and that a national system of higher education broad enough for all, with arms reaching out so as to embrace the employments of all the people, should be evenly and harmoniously developed. It is true that the purpose has been sometimes misapprehended, and perhaps sometimes misrepresented. It was not to make less of the humanities — that is, the languages, literatures, *belles lettres*, etc.—unless less were needful to the harmonious evolution of all the human powers; but it was certainly to make more of the branches particularly applicable to the circumstances and life of the people. The languages, ancient and modern; the literatures of the world, with all their treasures; history, with all its inspiration; mathematics, with all its exacting discipline, continue and will always continue. They continue with less superstitious idol-worship, but even with keener relish; for the stomach is robust, and the food is treated with more philosophic judgment and more discriminating sense. Law and medicine are not only being placed upon foundations of learning and advanced to the plane of college and professional work, but they are being given new life and power thru research and discussion, through dissection and demonstration — the method so characteristic of the new scientific spirit in the world. And how this scientific spirit distinguishes the state universities! They did not get it from either old England or New England, but it is breathing thru all their work and leading them into endless fields of which our fathers never dreamed. It gives intensity and fascination to the study of the universe, and brings the processes and forces of nature to the study of man and his affairs.

THE SCHOOLS AND THE INDUSTRIAL ARTS

Perhaps no feature of the state universities is more characteristic than the extent to which they are applying scientific principles to the advancement of the industrial arts. If a people is to grow great, its schools must support and shape its industries. No nation can be strong which is not a nation of workers. Work is education. Education is the product of the contacts and experiences of life. The application of scientific principles improves the work, and the improvement of the work uplifts the worker. It not only uplifts the worker, but it uplifts his wife and the home she manages, and his children and the schools they attend, and the society of which they are all a part, and the nation to which they give their loyalty and their love.

On the night after the awards in the department of industrial arts at the world's exposition of 1878 a company of English manufacturers and statesmen met in Paris, in humiliation and chagrin, to consider what might have been. They had been accustomed to secure the major part of the awards, but this time the honors had gone to others. This and that reason was assigned. Some questioned the fairness of the judges. Sir Lion Playfair put a shot in the bull's eye when he said: "Gentlemen, it is better that we undeceive ourselves. It is the polytechnic schools of the continent that are beating us. We shall lose our primacy irretrievably unless we do much more for the technical schools than we have been doing." And Britain has been profiting by the lesson. The intelligence of the British empire is agitated upon that subject today as upon no other phase of popular education. And the conditions call more irresistibly for attention to the subject in the United States than in Europe. Between 1840 and 1890 the population of Europe increased 50 per cent., from 240,000,000 to 350,000,000; but their manufactures advanced 300 per cent., from $5,500,000,000 to $15,000,000,000. In the same time the population of the United States went up 370 per cent., from 17,000,000 to 63,000,000, and our manufactures advanced 1,800 per cent., from $500,000,000 to $9,000,000,000. In other words, the growth of our manufactures did not keep pace with theirs when population is considered. Notwithstanding the volume of our agricultural products, and notwithstanding the greater needs of people in new homes, and our much-vaunted genius at invention and construction, the balance of our foreign trade in raw and manufactured merchandise has been against us more years than otherwise since 1840.

The mixture of races — the general shaking up — should have produced — and, we believe, has produced a brighter, — a more versatile and vigorous people here than is left there. Doubtless, upon the average, they live better, are more evenly educated, and are more ambitious than the people of Europe. Our resources of fields and mines and waters are much greater than theirs. We should have advanced in manufactures more rapidly than they. We, as well as Great Britain, must face the inevitable. If this nation is to stand strong and great among the nations, it must pay serious attention to the training and diffusion of engineering talent; it must have a scientific system of industrial schooling extending from the university to the primary grade, to the end that we may *produce* more *per capita* than the people of other nations. Nothing else will assure this, unless an evenly balanced system of education will do so. Possibly most of us believe that we may make laws capable of affording some assistance in this matter, but in the end we shall find unquestionably that the quality, and doubtless the volume and value, of our products must depend upon our schools much more than upon our laws.

The man must always remain greater than the machine. In spite of the application of steam and electricity and the use of all manner of mechanical devices, the personal element must remain the dominant factor in production. It was, indeed, a wise statesmanship which, by the side of the old-time classical and linguistic studies, established scientific training in the agricultural and mechanical arts as a distinguishing feature of the great national system of advanced schools which was called into being by the Morrill act. A system of education which omits the scientific treatment of soils and orchards and the animal industries, and which has no direct and practical application to architecture, to civil, electrical, mechanical, sanitary, mining, and railroad engineering, may be all right as far as it goes, but certainly it is a very one-sided system. It is idle to grow emotional over a college education for boys and girls from the farms and the factories, unless the sympathies of the college for the farm and the factory are real, and unless the curriculum of the college connects with the thought and the work which prevail there. Learning and labor must walk together. Learning must keep labor upon her feet; labor must hold learning upon the earth. Neither is to grovel or soar. They are to walk uprightly in the dignity of true manhood and womanhood, with faces to the rising sun, and with hearts keyed to the music of the skies. When that union is complete, it will be the schools, rather than the laws, which will make it so. The great effort to complete it is one of the distinguishing features of the state universities. The results are already beginning to be apparent. The association of the work in the humanities with the work on the experiment farms and in the drafting-rooms, the shops, and the great engineering laboratories of our state universities is turning the educational thought of the country. It is true this work is but just begun, but it is already giving a great uplift to labor; and it is already giving more breadth and robustness to learning. It is doing much more. When laying foundations which will enable American products to command American markets and have a fair chance in the markets of the world, it promotes the best and highest education thru the association of the strongest qualities of the human race; and it cements the common brotherhood when it opens the way for the play of that wondrous harpsichord of nature which finds a home in every human breast, and which, if given a chance, will make the wide world kin.

PUBLIC QUESTIONS

As the coming of a broader era in ethical thought, and of new economic and social conditions, led self-governing and rapidly growing states to set up state universities, it might well be expected that those universities would be distinguished at an early day for their work in the field of philosophic thought as applied to what may well be called "public questions." The expectation has in some measure been realized. Public questions are not lacking either in urgency or in number, and the state universities are attacking them with an independence of judgment and an inherited aptitude for scientific methods of investigation which are most encouraging.

Let us take an example. Recent years have witnessed a very marked change in the composition of the American people, and practically a complete disappearance of the economic conditions upon which the common thought of the nation has been predicated from its birth. Indeed, it is not too much to say that we are at the point of juncture between two of those mighty epochs which mark off the history of the world into cycles. A government made and administered upon the basis of manhood suffrage, the like of which the world never saw before, is trying to pass this danger point in safety. It is a sublime spectacle. We are encountering unprecedented perplexities. The dangers are many. Other nations have perished in less perilous breakers. Because the good ship's crew is an American crowd, and proverbially confident and good-natured, it is not wise to put aside the sufferings and the protests of our fellows with indifference or derision. The well-being of every citizen is a high concern of democratic government. The new use of physical forces and the marvelous evolution of machinery are preventing men who want work from getting it, or from getting so much as they need. Vast aggregations of capital are concentrating industries and economizing construction so as to control the markets of the world, and this cuts wages and paralyzes individual enterprise. Then the wage-earners combine in a heroic struggle for more work and better pay. Great labor organizations cover the land. Tho calculated to attract the shiftless, they are characterized by a large measure of self-restraint and a very systematic procedure. While all this is coming to pass, thousands of men have accumulated millions of money in so brief a time as to forbid the belief that energy and prudence have been the only factors in the gathering of their estates. It is a common belief that these monstrous fortunes have resulted from laws that are not even-handed, from unlawful business practices, and from undue grants of public power. Worse still, it is the common conviction that these great aggregations of wealth and power are used improperly and effectually, thru the political machinery of the country, to exact further legislation in their own interest and to control the officers whose duty it is to construe and execute the laws. And all this has shaken the traditional belief that all men stand equal before the law, on the one hand, and has sensibly diminished the common respect of the multitudes for officials, and that common confidence in the acts of the government which is the inviolable life-principle of a constitutional state.

It will not do to pass such matters by with the superficial thought that in some way we have shuffled thru troubles in the past and shall doubtless do it again. If the old, proud boast that an American child who is at the bottom of the ladder today has an even chance with every other child of being at the top of it tomorrow is even doubted, then it is to be made good beyond peradventure. If old laws do not apply to new economic conditions, then new laws are to be made which do. It is the function of the state to teach historically the priceless value of organized society and to prove objectively that civic institutions are of equal value to all. Thrift is to be encouraged by respecting and rewarding it, but overreaching is to be limited rather than promoted by law. The rich must pay for the safeguards which community life has thrown around the property which community life has enabled them to acquire. The poor are to be given education, and all the other concomitants of democratic government, in kind and quality, which will take hold upon *their* manner of life and assure *them* a rightful share in the present benefits and the ultimate destiny of human society. The movement for securing these great ends will have to rest upon research that is reliable as well as upon reasoning that is philosophic; and such movements will have to be sustained by schools which are neither disposed to coddle the people because they want their votes nor fawn upon the patrons of enormous wealth in the hope of favors yet to come. This is only an example, but it is sufficient to show that the political science of a cosmopolitan and self-governing people may well have the leavening and leveling influence of independent and democratic universities.

CATHOLICITY OF SPIRIT

Catholicity of spirit is a distinguishing feature of the state universities. Out of this fact, altho it is a chief element of their strength, has grown the main, if not the only, criticism which has been brought against them.

It is high time that anyone who is in the road of the irresistible trend of American common life should find it out. Superstitious reverence for creeds is passing away. Much of the best blood of the world has been shed in religious wars, but it will not be so hereafter. We have about passed thru a religious revolution without bloodshed. It is, perhaps, the first peaceful religious revolution in history, and, better than that, it is one which makes for future peace. Life *is* greater than dogma. As patriotism is above party, so oneness with the God of the universe is not in the keeping of synods and assemblies. The followers of the union flag and of a common Lord will be glad to affiliate with and support a denomination, but they are going to live in common association without so much reference to denominations, and the education of their children is not going to be limited by the peculiar plans of prophets, priests, and kings. I happen to be a member of the Presbyterian church, with pride in its history and interest in its destiny. There are three times as many members of that church in the student body of the University of Illinois as in the two Presbyterian colleges of that state put together, and, unless revolutions move backward, their number is going to increase. They are being more broadly, thoroly, and wisely educated, because educated in association with Methodists and Baptists and Roman Catholics, and in association with every branch of learning and every higher interest of a cosmopolitan people. To suppose that these students, men and women grown, are going to permit their mingling with the multitude to lead them away from the Presbyterian fold is to suppose that the arms of that church are weaker than they are, or that the moral character of her young people is less substantial than it is. They are not going to separate from the church, unless in cases where they would in any event, but they are going to draw the dominant powers of that church closer to the heart of the national life.

To characterize a state university as a godless and irreligious institution would be the same as characterizing an American state as a godless and irreligious state, or a state educational system as an irreligious system. It would be a thoughtless and unjustifiable aspersion, for both the state and its university are the creations of people whose history, sympathies, and intuitions are all based upon the fundamental principles of the Christian religion. As well said by Judge Storey, we have no established religion, and never will have; we have no written law to connect church and state, and never will have; but the Christian church and American institutions are so closely interwoven that an attack upon one is an attack upon the other. It is a great mistake, and an altogether too common one, to think that the necessary exclusion of denominational teaching from the state institutions, because of denominational differences and zeal, naturally means the exclusion of spiritual culture altogether. The separation of the world's people into different religious parties was altogether natural and desirable. It has counted heavily for the spread of religion and the advance of civilization, and it will doubtless continue to do so. But people are not thinking as they once did. There is a great mass of people—doubtless nine-tenths of the intelligent citizens of this country—who, in the twilight of nineteenth-century intellectual progress, while glad to cherish the denomination which suits them best, or into which they have come by chance, will yet refuse to believe that the mere matters of form or ceremony or theological mysticism, which are in difference between the teachers of religious sects, constitute all, or any considerable part, of religion. The state universities will not live in anybody's ruins, and they are very ready to let alone the religious differences and the theological disputations in which the experts have such splendid times. But they will teach all the rest of Christianity, and they will continue to illustrate the fact, that entire toleration of religious opinion does not deaden religious thought, but, on the contrary, and in pre-eminent degree among scholars, it promotes the freedom of discussion, it enlarges the outlook, it broadens and sharpens the sympathies, and it makes for the fuller expression of the higher qualities of human nature in noble acts which must always continue to control sects and states alike.

Such education, in such associations, can be made better by nothing so much as by that readjustment in plans to which it inevitably leads. If the denominations will come, in full measure, into sympathy with the thought which permeates this great work; if they will take for their children such parts of the general education, which the state is so willing and able to give, as will qualify them for their work in life; if they will reserve their own resources for such purely sectarian and theological instruction as they may think well to give, and will maintain their special schools in mutual and helpful relations with those of the state — they will show worldly wisdom, for they will enlarge the efficiency of their special schools; they will find their pulpits in closer touch with life, for the teachings of their ministry will be more attractive to the multitude, and they will give the help which is needed and which they may give easily to shape the course and quicken and direct the feelings of the universities.

PATRIOTIC AIMS

All educational institutions may be presumed to exist for patriotic aims, but with the coming of the land-grant institutions there came into the higher educational work of the country new elements which were to contribute much to the organized strength of the nation. Scientific principles were not only to be applied to mechanics, so that all the resources would be developed and all the industries directed, in the confidence that this would multiply the work and enhance the prosperity of the people, but scientific principles were to be applied in liberal measure to those particular branches of mechanics which relate to effectiveness in war. The result is plainly evident in the strength and effectiveness of American arms in the war with Spain. But very much more than this was undertaken, and the result of that is evident also. The congressional act to which most of the state universities trace their greatest inspiration, if not their origin, became a law in the very darkest hour of the nation's maturer life.

It was just at the close of the series of melancholy military defeats in the memorable campaign upon the James river, in which 15,000 citizen union soldiers had died in battle that the nation might live; it was when the national capitol was uncovered and the very continuance of the government in doubt, that the greatest of the presidents used the same penful of ink to sign the call for 300,000 more men for the army and to sign the act providing for the endowment of state universities. Is it any wonder that the act carried a provision that every institution it spoke into existence, "to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life," should also maintain a department of military science? Since then many boys have wished it were not so, but many boys have wished many things which were not good for them. It helps their physique, it gives them elasticity of step and manliness of carriage, and, perhaps better than all, it is an object-lesson in obedience without compromise. But all this was not the sum of the purpose of the congressional requirement. The distinct purpose of that requirement was to train educated young men for officers in the army of the United States. It has fulfilled its purpose so well that regiments and batallions rivaling the one at the United States Military Academy upon the Hudson have become distinguished features of the state universities. Not long ago I heard General Merritt—who was for several years commandant at the United States Military Academy, and is now leading our armed forces across the seas to co-operate with Dewey and take possession of the Philippines, at least until the time when Spain shall pay us roundly for her deviltry at our doors—say that a certain university cadet regiment was the most perfect cadet organization he had ever seen. These young, scientifically trained mechanics and soldiers are exerting their powers in the army and navy. The result was seen at Manila and again at Santiago. It will be seen in larger measure hereafter, whenever and wherever it may be necessary to send the armed forces of the United States to discharge the God-imposed functions of a Christian nation and command the peace of the world in the interests of free institutions and the universal progress.

THE INFLUENCE OF STATE UNIVERSITIES

If I have dwelt at some length upon the distinguishing features of the state universities, it is not more because of my familiarity with them than because of my belief that they represent the latest and greatest and the most unique step in the evolution of popular education, and have exerted a revolutionizing influence upon all of the higher educational work of the country. Springing from all the people of a state, they have ministered to the higher life of all the people of the state, and their marvelous growth has shown the older universities the course which they must take to attract a wide constituency in all the states. The older universities have taken that course, so far as they can. They have taken it so generally as to make that course the course of a national system of education. It is idle to debate the details of this great movement or assume to parcel out the credit of it. It was a movement of the people. It came along in the Almighty's time, just as the other movements have come along which have shaped the thought and molded the life of the nation. It came because it was necessary that a vast enterprise in free government should have a system of education with the elements which would enable a free people to become a great and well-balanced people.

If the needs of the nation have produced universities and determined the characteristics of the educational system, the life of the nation is in turn being quickened and directed by them. History is here repeating itself. The histories of the universities and the histories of the nations are more closely related than we are accustomed to recall. The distinguishing features of the English universities are easily traceable to the formative period of English life. The early development of religious freedom and civil liberty in middle Europe has had much to do with the free and scientific spirit of the German schools. The universities of the older American states inherited their organization and plans, their philosophy and ideals, from old England. They grafted upon them their own theological views, and their colonial life exerted some other inconsiderable influences upon them. But the old English universities, the German universities, and the earlier American universities sprang from the world's progress and radiated the influences which have broken out the roads for still further progress. We are advancing to the time when the general unlocking of the truth shall make the whole world free. Institutions are not the ends; they are only means. It is with institutions as with men. They do their work, and then, if they cannot do the higher work which is to be done, they give way to others which can. The glory and the hope of the world are in the fact that its succeeding cycles are upon continually advancing planes.

All classes and all institutions will have to recognize the inexorable logic of events. Freedom has been making headway in the intellectual life of the world, and more rapidly in this country than in any other. There has been a great and a distinctive movement in higher education in America, and it will have to be reckoned with, and it ought to be. It has been initiated by the people. It is now widespread and strong. It has become a part of the national history and an inspiration in the national life. It is a broad and beneficent movement. It appeals to every intellectual, every spiritual, every material interest of the nation. It is thoroly American. It is aiming at general results. It is opposed to no enterprise which accords with the common well-being of the people. It will aid every individual and stimulate every right interest willing to accept it. It necessitates recognition and the readjustment of plans. True wisdom will see this, and true policy will support this great movement, make it as strong as possible, and get all the help which it can give, for it has become the backbone of a national system of education which is equal to the support of free institutions.

THE DISTINGUISHING FEATURES OF AMERICAN UNIVERSITIES

The life in our American universities is very typical of the life in our American states. The life in our universities is in very large measure a realization of the aspirations of the life in our states.

That life is thoroly democratic. Every language and creed and social condition is represented. Swallow-tailed coats are somewhat conspicuous in the East and, perhaps, somewhat conspicuous by their absence in the West, but the greater number are learning the uses of the swallowtail, on the one hand, and paying larger respect to the manual industries, on the other. Students who must leave college at times to earn money with which to finish work side by side with others who never earned a dollar in their lives. Men and women meet upon an equality in their work, and mingle freely in social life. The whole body is stronger and better for it. By reason of this the West has been saved from much of the innate foolishness which centers in the female seminaries of the East. Every phase of life and thought is the subject of discussion. Differences of birth or station or of lines of work count for little; character and scholarship count for much. If one lacks moral fiber, he soon suffers from it; if he takes a position, he will have to defend it; if he is lazy, wealth and keenness will not save him. Pretense is of no avail. There is no favoritism. University opinion and the term examinations are inexorable. Everyone soon finds his level. The prevailing traits are steadiness, seriousness, enthusiasm, and cheerfulness. Animal spirits run high. Ambition is strong. The freshman longs to be a sophomore, and the sophomore to be a junior, and the junior glories in the fact that he will next year be a senior; and as the senior sees the happy vision fleeting from him, he wishes he was a freshman again. It is the survival of the best and the strongest, but the best and the strongest form the larger part of the whole student body. All the influences make, not for the polished nobleman, whether he is a scholar or not, as the English universities do; not for scholarship with indifference as to manhood, as the German universities do; not for enlarging upon or perpetuating the artificial differences of life; but make for both manhood and scholarship, for toleration of opinion, for affinity of feeling, and for the best ideals of American citizenship.

The universities of this country which are going to endure and exert a decisive influence upon our great public educational system, and so upon the life of the nation, have not been imported. They have resulted from our conditions, our ideals, our aspirations. They have been set up by an earnest, hardy, pioneer people, ready to labor, to give, and to wait in order that their children might fare better than they, and in order that the faith which brought their fathers over the sea might be certain of a fruition in the largest and the most beneficent results. The people were not willing that the institutions of higher learning should rest upon mere differences in creeds, be left to the precarious support of the wealthy, or be permitted to fall under the control of a class. They followed a great national impulse, an impulse which laid foundations for new universities and changed the characters of older ones. They followed no pattern. They took whatever seemed good and proved adaptable to American life, wherever they could find it, and added new features from their own experiences and their own thought, and those features were neither few nor insignificant.

What they did is giving the nation its chief glory. It is making the highest learning more popular and free in these states than anywhere else on the globe. It is raising the standard of living. It is training college men and women, not for study alone, but for *life;* it is educating them to engage in all the activities and lead the thought of the crowd, and not educating them away from the masses, as of old; it is maintaining the equilibrium of interests in the nation, holding the people to the foundation principles of free government, and carrying to coming generations the guarantees of the great charters of English liberty and popular freedom. It is doing this by teaching and exemplifying the doctrine that constitutional states exist not for the few, but for all; not for security and power alone, but for freedom and the just rights of everyone; not for ribbons, and gold braid, and armies, and shows, but for individual opportunity and the common progress. It is insuring all this by pursuing learning for learning's sake, by dignifying skilled labor as well as intellectual study, by associating the powers of the brain and heart and hand together, by giving every son and daughter of the people an equal chance, and by paying the highest respect to those who go the farthest and accomplish the most for themselves and for the race.

OUR EDUCATIONAL EXHIBIT AT THE INTERNATIONAL EXPOSITION IN PARIS IN 1900

BY W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION

In view of the approaching world's fair, soon to be held in Paris, commencing April 15, 1900, and closing on November 15 of the same year, I have ventured to bring before the National Educational Association the suggestion of the appointment of a general committee, whose duty it should be to promote in all suitable ways the preparation of an exhibit of the educational condition and progress within the United States. Such a committee ought to be a large one and formed in such a manner as to represent all educational interests, and divide easily into subcommittees for special work. Such a committee, for example, should be composed of ten state superintendents, ten city superintendents, ten presidents of colleges, universities, or normal schools; ten representatives of private or denominational schools, five librarians of public libraries, and five representatives of state and other institutions for the education of special classes, including asylums for orphans, deaf and dumb, blind, state reform schools, and the like.

This would make up a committee of fifty or more persons, who should be appointed by the Board of Directors of the association, and be called together in November next to organize and begin their work.

This committee would be of great service to the commissioners or other officers appointed by the president to take charge of the exhibit of the United States. It would stimulate action in all parts of the country, and assist all who seek light as to the best modes of showing educational material.

One of the most important functions of the committee would be to appoint a commission to report on the French and other educational exhibits as found in place at Paris, and to study their relation to the social and political ideals fostered by the several states that prepared these exhibits.

Perhaps the most noteworthy movement in the history of the past twenty-five years is the rise of German productive industry under the direct influence of the German imperial government. It would seem that the annual wealth production of that nation has increased within the period of a quarter of a century extending from the epoch of the Franco-Prussian war by something near 40 per cent., and that it will soon be 50 per cent. greater than it was before the victory at Sedan. Is the French nation fully aware of this tremendous movement to enhance German power, not directly by military preparation, but by productive industry? If so, what are its methods of national defense? And what are the English and the Russians and the southern European powers doing in the meanwhile? Germany is the leading country, since the time of Frederick the Great, in using the school as a great instrument of political progress. Prussia was before all nations in directing its national housekeeping by the systematic results of intelligence. Under the influence of Prussian statesmen, it is found, for instance, that the German people do not consume as much sugar as England and France, and yet, having a northern climate, it should have the benefit of the more carbon which sugar furnishes. Looking farther, it notes the world is depending on the inhabitants of tropical and subtropical countries for the supply of this useful article. Why should not a method be found by which the people of Saxony and Prussia and Bavaria can produce their own sugar?

The commission not only asks this question, but it sets a series of experiments in operation, under the charge of agricultural chemists and scientific farmers. The most available plant for the purpose seems to be the beet, and bounties are offered by the government to encourage beet raising and sugar manufacture, adding a round sum to the price of all that is exported. To the astonishment of the world, in a few years the beet-root sugar of the world has come to exceed the cane sugar in the ratio of 9 to 7. There were 4,500,000 tons of beet-root sugar to 3,500,000 tons of cane sugar.

German political economy knows that the people that produces the raw material is not the richest people. To be the richest people it must become a great manufacturing people, and also a great commercial people. What are the higher commercial schools of Germany teaching their pupils? What are the schools of chemistry teaching the youth that are to direct German manufactures? It is not at all likely that we know by direct inspection. We can, however, see the importance of those schools by their results. Could not a well-appointed commission learn much by studying the Paris exposition in 1900? It would scarcely gain entrance into the government schools where new processes are developing, but it could learn, by outside inquiry, separate items which can be pieced together and made very suggestive.

The secret methods used in industrial processes in Germany, France, or England can be learned by other nations, and, in fact, soon become well-known devices. The conceited nations who are not anxious to adopt new inventions, nor to educate their people in directive power, soon find themselves lagging behind in power of national defense. There never was an educative lesson taken more to heart than that of Königgrätz, except the similar and greater one of Sedan.

The great advantage of studying education at an international exposition is found chiefly in its bringing together the educational side by side with the industrial exhibit.

The most advanced civilization of our day has entered what may be designated as a third epoch of industrial history. The first epoch is one wherein little or no division of labor exists, and wherein most of the combination is in the interest of the protection of life and means of subsistence from the foes of the state. In the imperfect political forms existing, the citizen cannot devote his best energies to productive industry — the best talent must be devoted to the state in its military aspect; and the consequence is that slaves and women are compelled to attend to the industries, and to provide food, clothing, and shelter for the necessities of life. Under such circumstances division of labor and combination are not possible to their full extent. When the state becomes settled, and its limits have extended so as to include under one government the many smaller tribes and principalities that were never able to live in peace when independent, but were forever entering as factors into a process of mutual hostility — then settled peace comes, and division of labor is possible, where productive industry becomes recognized as a function of free men. The second epoch of industry is this one of division of labor as the supreme principle. "Divide and conquer" is its motto. It limits the training of the laborer to a single simple function or activity, so as to secure thereby the greatest possible skill and rapidity of production. Such concentration of individual energy upon the parts of a process is possible only where combination can be easily effected between the different kinds of workmen, and thus the finished product turned out by the association working as a single individual. This second phase of industry is not accompanied with the corresponding enlightenment of the individual laborer. It aims at infinite specialization, at concentrating the entire energy of the laborer upon the simple movement of the body, and thus reduces the human being to a machine, and tends to narrow his intellect correspondingly.

But out of the second class of industry, by a sort of dialectic necessity, proceeds the third. The ultimate tendency of the division of labor is to subdivide each process for the sake of acquiring skill, until a maximum of simplicity is reached. It is here that the aid of machinery comes in. The simpler the movement, the easier it is to find a mechanical process that can be substituted for that of the human hand. When a number of simple mechanical processes are discovered, the directing mind of labor begins to invent combinations of machinery, and with this enters the third epoch of industry. Machinery continually grows more complex in this epoch, and tends continually to invade the province of the mere hand laborer, and to render him useless by providing cheaper and more certain means of accomplishing his work.

To the narrow, simple mind of the mere hand laborer the avatar of machinery appears as a direful portent, all-destructive of his means of subsistence and of his very *raison d'être.* But the Divine Providence uses machinery as the instrument of individual freedom. The appliance is twofold:

1. The first effect of machinery is to increase very largely the productivity of the individual, and to cheapen the products of industry. Thus, when things are readjusted, the former hand laborer finds himself producing more, and able to purchase his private supply with less money. The social whole gets better fed, sheltered, and clothed, with less labor than formerly, and has, therefore, surplus time to produce ornament and to educate itself.

2. The second effect of machinery is to elevate the laborer by demanding of him a higher quality of labor. Mere hand labor required the minimum of brain effort. But when man is set to directing machinery, he becomes less a hand laborer and more a brain laborer. He must understand the combination of movements in his machine, and must exercise watchfulness and forethought. The epoch of machinery continually tends toward the production of more and more complex machines, combining many formerly separate trades in one machine, and, as a consequence, requiring of the director of the machine greater power of combination. Each laborer now comes to stand where the overseer or supervisor stood before. The tendency of machinery is, therefore, to remove the laborer as far as possible from mere hand work, and to demand of him alertness of mind and versatility — exactly opposite traits of mind from those produced by mere division of labor. Mere brute force being in abeyance, it is noticeable that woman becomes more equal to man in the third epoch of industry, and a sharer with him in all forms of labor.

Whereas the principle of mere division of labor tended toward the complete reduction of the laborer to a hand or a foot — a brute force — and demanded of him the minimum of brains, and therefore did not stimulate or encourage school education, the new principle of labor-saving machinery makes a direct demand for directive intellect, and therefore encourages education as a means to secure it. The type of this highest phase of human industry may be studied in the Springfield arsenal, in the Waltham watch manufactory, in the latest machines for printing newspapers, manufacturing pins, weaving ribbons and carpets, etc. This form of industry requires general intelligence in the workman as an indispensable basis, and the school education which is thus rendered necessary reacts again upon the industry, making new and subtler combinations of machinery, and continually emancipating the laborer from drudgery.

If, in the state of barbarism, only one in a thousand can be spared for the work of ornament, in the stage of the division of labor at least one in a hundred can be reserved for the production of the beautiful, and in the epoch of machinery the number devoted to art and culture increases one in ten, and, prospectively, beyond that.

From these considerations it is obvious how pertinent will be the studies of our teachers upon the products of machinery in the world exposition as directly related to the progress of school education.

Wherever there is evidence of versatility of skill in the individual workman, or evidence of high directive power, there is equal evidence of school education or its equivalent.

This correlation of productive industry with education has heen recognized in world's fairs. In the Paris exposition of 1855 there was a subdivision devoted to primary education, and again in that of London of 1862 the class "education" appeared in the schedule. The primary schools of France made a show in the exhibition at Paris in 1867. At Vienna, in 1873, we all became interested in the educational department, and prepared to do a much greater work in our own international fair, the then approaching centennial anniversary of the birth of our nation.

In the Paris exposition of 1889 education in France received a wonderful illumination. Its thoroness and its penetration to all classes of society were demonstrated. The fact that the United States had only a small rudimentary exhibit there was a source of regret then and since, not only on the part of Americans, but also on the part of France and other nations, as was shown by their oft-repeated comments. In the Columbian exposition, so fresh in our memory, education occupied a much larger space than in any of the fairs that had preceded it, and the grand impression it made is still fresh in our minds.

The French, it is well known, are eminent for their ability to make an exhibit tell its own story. As Æsop taught the animals to speak like rational beings, so the French have taught the art of arranging things in such a way as make them talk. Hence it has happened that more useful hints are to be derived from a French educational exhibit than from any other as regards the illustration by means of object-lessons.

The American method of instruction has not been that of object-lessons. It has leaned rather to the side known as the text-book method. But educational methods are gradually undergoing revolution all over the country, so far as *instruction* is concerned, so as to adopt the "method of investigation" in place of the old method, which is spoken of contemptuously as the "cramming text-book method." The new method is all-worthy of adoption, but the old, perhaps, is not sufficiently valued. Hence we have extremes and unnecessary one-sidedness in the newest devotees of the method of investigation. The tendency is, of course, to neglect the printed page and the critical comparison of authorities, and to confine teaching too much to individual experiment and original investigation. It must never be forgotten that the school has its chief work in initiating the pupil into the accumulated wisdom of the race as a preliminary to his original additions to the same. Unless he knows what has been thought, observed, and done, he runs the risk of traveling round in a narrow circle of his own, and wasting his life in repeating discoveries long since made. Hence, in early life, there predominates the assimilating stage of education; in maturer life, the stage of original acquisition.

And yet, even in this characterization of the difference between the school and practical life, we are apt to underrate the assimilative stage. For inasmuch as all human life is vicarious and all mankind is made by means of spoken and printed language to live for each individual — so that each individual is able, thru language, to participate spiritually in the experience of the race without being obliged to suffer the terrible throes — the agony and sweat of blood — that that experience has cost in the aggregate — it follows that the greater part of life is, after all, the participation in the life of the race and its assimilation, rather than exclusively original. The race transcends the individual almost in an infinite potency. What are the senses of one scientific man to the aggregate senses of all scientific men? What is the thinking of one philosopher to the thinking of all philosophers? The physical labor of one man is insignificant compared with that of his community; still less potent is the unaided might of the individual thinker, experimenter, or literary man. Genius is the ascent of the individual into the vision and will-power of the race — so that he is guided by the universality of mankind, and is a fit guide for others. Without this participation in the common mind and experience of the race, the individual cannot achieve anything except erratic and negative endeavors. He conspires against humanity. He mistakes idiosyncrasy for originality, and his life is a profitless attempt to dispense with sunlight and to see the world by the shine of his own eyes. The outcome of such seeing is hallucination and the specter world.

For these reasons we must take care not to undervalue the old pedagogic method of critical sifting of the text-book lessons as an initiation of the pupil into the method of availing himself of the experience of mankind. Its compass did not include all, but, if a choice must be made, it included what should be first chosen.

The study of a nation's text-books is for these reasons of importance, and every educational exhibit ought to have such books fully represented.

It has been felt from the beginning that it would be impossible to show up the products of education as the products of the farm and workshop are presented. Education produces cultured human beings, and these cannot be placed on exhibition like grain or cloth. Neither can the methods of education be shown to advantage, except in the schoolroom. Only the physical appliances can be well shown. These are the buildings, furniture, apparatus, and books. These appliances do not have so direct a relation to their product as the plow and the reaper do to the grain, or the spinning-jenny and the loom do to the cloth. But, as buildings and furniture have a very serious influence for weal or woe on the health of children, these, at least, are of value as items of exhibit.

In the first attempts to exhibit the results of education in a world's fair, the teacher naturally resorted to the use of examination papers, and the work of classes and grades on prepared questions was bound into volumes, but without exciting that degree of interest and inquiry that had been expected. It required too much time to examine them.

It is almost incompatible with the idea of an exposition to present its material in the form of books, and to require a minute and careful examination in order to form a comparative estimate of its value. It is true that a special commission, sent to report on education, might, in the course of the summer, go thru, with some degree of attention, the thousands of volumes of pupils' work presented at such an exposition, and report the relative merits. The most profitable investigation would still remain to the commission; it should proceed to visit the localities that sent the best work, and study the methods of instruction there practiced. For it is not the knowledge of the fact that this or that place excels in its work which is of value, but the knowledge of the method of its accomplishment.

It has happened, therefore, that the exhibit of education has drifted more and more toward what can be presented in a graphic form.

Instruction in penmanship, drawing, and map-making can be best shown.

The photograph has come more and more into requisition. It may show the school architecture at a glance, and also the personnel of teachers and pupils. Photographs of interiors may show the furniture and apparatus. An exhibition of photographs showing every school building in the state, with its pupils and teachers in front of the building, would be the most unique attraction ever presented at an international exposition. For it would show the countenance, stature, costume of pupils and teachers, the degree of importance which the community placed upon the school by its costliness and its improvements.

After the photograph comes the large chart showing items of comparative population, school attendance, number of teachers, length of annual session, finances as regards state aid and local taxes.

We all remember the remarkable series of charts showing the statistics of Harvard College and its history at the Columbian exposition. They are reproduced in General Eaton's report of that exposition printed by the Bureau of Education in the Annual Report for 1892–93. What a valuable exhibit of higher education could be made with similar charts of each college and university in the United States!

When we consider the object of school education, we are not surprised at the amount of room given to new and often slight departures from the current traditions of education. A new system of map-drawing or a new object-lesson will receive more attention than a large display of solid work in the regular lines.

And yet, this is not so strange when we compare this with the history of school methods. For a fact that strikes us as a great paradox, when we look over the history of education, is that nearly all of the reforms in pedagogy have come from radical, negative men — men who were idiosyncratic, and who departed from the beaten paths of society to such a degree as to amount to a deformity. Such were Pestalozzi, Basedow, Jacotot, and a host of reformers that emanated from the school of Rousseau. Altho the work of the teacher would seem to be that of initiating the pupil into the conventionalities of civilized life, the school of Rousseau theoretically taught that the end of education is to restore the child to nature. The grain of truth in this spirit of protest against the forms and prescriptions of society lies in this: education is to make man conscious of the necessity of the conventionalities and usages which he is to wear about him — the clothes, as it were, of his inner spiritual self — thru life. And all consciousness begins with negation. Analysis is a process of tearing to pieces, and the fabric of society is thus torn to shreds as preliminary to seeing its necessity by synthesis.

Hence education, more than any other art, lives by new departures. Its growth resembles a vegetable organism rather than an animal organism. It grows by the sprouting out of new life upon the old, and the old becomes in this way the soil and support of the new. Each new branch or twig or leaf is a new individual, rooting in the old as its soil. The animal's limbs are not separate individuals, but in each one he is at home and at one with himself. The animal is one organism in all his members, and has the psychological faculty of feeling, while the plant is a bundle of individualities, and cannot feel, but only live.

Education develops in the child a new thought or trains him to do a new act. Then by endless repetition it reduces the new activity to habit.

Repetition is essentially deadening—the reduction to habit is the reduction from a stage of conscious spontaneity to a state of unconscious, involuntary activity. And yet, all spiritual life depends upon this conversion of spontaneity into use and wont. But the process of converting a free activity, a new thought, into an unconscious habit is, after all, the process of freeing the will and the intellect from its concentration on a lower activity, in order that it may energize anew upon a larger synthesis. Without habit it can make no progress.

O'er its dead self it steps onward and upward to higher things, says a poet.

But the work of the teacher is in perpetual danger from this source. It treads always upon the brink of the abyss of dull routine and mechanical, soulless, unconscious repetition. Hence the necessity for, and the actual occurrence of, negative and one-sided reforms for the sake of relief from the soul-killing monotony. The circle of pedagogical change and reform ever revolves. Its general movements are:

1. From teaching the entire complexity of a thing to teaching its simplest elements; i. e., from exhaustive treatment to that of smattering.

2. From beginning with the elements of a thing to beginning with its final results.

3. From concentration on the intellectual technics to concentrating upon the practical.

4. From emphasizing the humanities and hastening the initiation of the child into all human combinations and into conscious communion with the spiritual life of mankind, to emphasizing the natural sciences and mathematics, and hastening the initiation into mechanic art and the means of combination of material objects.

5. From a striving to give a clear consciousness of every step taught, at once, to a blind obedience to prescription—learning formulas with only a practical end in view.

But let us return from these considerations of the detail of an educational exhibit and take up once more our chief reason for making elaborate preparation for this Paris exposition.

Our interest in the exposition in Paris and in all subsequent world expositions in Europe is not the same interest that it was in 1889. Since then we have risen out of our isolation and the Monroe doctrine, and have taken our first step to become one of the number of great powers that assume to direct the course of civilization and decide for the rest of the world its destiny. We shall probably count our seventy-five millions of people by 1900, the time of the Paris exposition. Considering our wealth-producing power and the enrollment in our schools, we may easily claim to be the most powerful nation in the world. That is to say, we may claim to have the strength on the whole, tho we are not using it to form great armies or navies. We are using it chiefly in productive industry. Our claims will be recognized by the united powers of Europe, and we shall be allowed our place in their councils. But we never can avail ourselves of the advantage, unless we as a nation become familiar with the political aims and aspirations of the several nations constituent in that great unity. We must know thoroly their history and their present purposes — not only the conscious purposes of their governments, but especially the more or less unconscious purposes in the popular instinct. For we must learn to interpret the words of rulers thru their actions, and their actions thru their convictions.

To learn to understand the wishes of other nations, and the means by which they make them valid, is the first lesson of diplomacy. And we as a nation are now fairly launched upon the era in which diplomacy will become more and more necessary to our success in obtaining the consideration that is due us.

World expositions are the grand object-lesson in which our people may best begin this study of our great contemporaries, the nations of Europe.

THE EDUCATIONAL OUTLOOK

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We are provincial and cosmopolitan, sectional and patriotic, individualistic and homogeneous.

Our provincialism is apparent to anyone who studies the persons gathered in any great national assembly. From one section come those who are conscious of possessing the prestige of age and tested systems. They know the past, delight in its record, and give much time to reciting its glories. They place too high a valuation upon what we have, and overestimate its usefulness in doing the work of today.

From the next division we meet those who have all the strength and dignity, as well as the sustaining confidence, that come from large material possessions. They are self-poised, and strong in the strength of their holdings. They are subject to the evils which come from relying too much upon the visible and measurable, and are developing a commercial spirit where a higher motive should be supreme.

We have with us representatives from those newer empires where the molders of thought are distinguished for their conservative, level-headed qualities. They have their feet on the ground and see things in their normal light. They have adopted the most of the best the ages have developed. They are graced by but few halos, and their skies are not arched with many rainbows. Their peculiar dangers lie in the direction of drill, formalism, and repression of the aspiring, ideal qualities.

In their neighbors we meet strong men from a section noted for alertness, eagerness, and an ardent hospitality for new ideas. Their heads are in the clouds, and they think they are not extravagant when they assert that "from the tops of their mountains," and the pinnacles of their theories, "they can tickle the toes of the angels." They are our pioneers, and not only feel the pulse of the world, but seem to have unseen wires connecting with the ends of the earth. Their mistakes are made in attempting to reduce iridescent dreams to sound pedagogic science. They have a tendency to perform too much of the experimentation of the world, and hence time, effort, and money are spent in producing unwholesome conditions and an unwise unrest.

From the far distance come those who have a system elaborate in all its details, supported by opulent appropriations, and supplemented with luxurious physical surroundings and appointments. Their system starts in the kindergarten and ends in the special departments of the university. They have the splendid strength given by brains and great force of character. Their errors are made in unduly exalting the machinery of the school, and unwarrantably expanding the powers of the state. Too high an estimate is placed on the serving power of money, the usefulness of physical means, and the value of paternalism.

The last in the group have a great problem to solve. They have to battle with indifference and contend with hostilities. They possess in their leaders men of wonderful earnestness, unusual capacity, marked devotion, together with a rare inheritance of culture and refinement. They will err if they attempt to reform the world tomorrow, because they will have a world on the next day which will not have stiffening enough to hold itself straight. The strain which is made to force progress may leave it without the power to proceed.

Our cosmopolitanism is shown in that peculiar facility with which we meet and mingle with others, adopt and adapt new ideas, make for ourselves congenial homes and alliances wherever fate or fortune domiciles us.

Our sectionalism is proved by the fierceness with which we contend for legislation for our individual hamlets, and our apparent inability to comprehend that the highest good of all is the greatest good of the community.

Our patriotism is vindicated by the ardor with which we stand as one man whenever a great crisis lifts the nation into the field of danger.

Our individualism is found in every community, and has its representatives from the ends of the earth and the islands of the sea. It is shown in costume, reading, thought, action, motive. We more largely than any other people have a citizenship with each counting one and representing himself.

Our homogeneousness is manifest in the common highway we travel, the spirit which animates us, the common destiny which consciously and unconsciously we are working out, and the final goal toward which we are tending.

We are old enough to see all this and to realize that we have reached a point in our national life where, above all things, we need to have souls that are well born. We are discovering that these we cannot have until we are willing to put more than one generation into the "borning." A sentiment which is less than a generation old fails at times of the greatest strain, and is not controlling because it does not exert its power unconsciously.

We are in a stage of our advancement where we can comprehend that "we have been living our *Iliad;* the time has come when we must write it." But it does not require great astuteness to discover that our civilization and prosperity cost too much if they deprive our young people of the sturdiness that characterized those who lived in a simpler way.

The log house and the little red schoolhouse have furnished their full share of the leaders of the nation. A pioneer and poor people can live uninjured by rude surroundings, and under trying conditions produce great men, but a poor people in an old country cannot remain uncontaminated by a degrading environment, or breed the best type of manhood. Conditions that were, at least, not harmful in early days are becoming sources of poison in this age.

Certain experiences gave us the peculiar ruggedness of the past; but the day of chores and homely cares has disappeared with other reluctantly departing systems. We must find new ways of developing old qualities. These facts are beginning to influence the educational thought of the day, and modify the teaching in our schools. The children must have homes which are centers of attraction, promoters of soberness of thought and fixity of purpose, and nurturers of ideals. Their food must be satisfying and nourishing, rather than stimulating and irritating. Their dress must not occupy too much of the attention of the wearer, and be worn for the purpose of attracting the admiration of the beholder. Their amusements must be wholesome and helpful instead of demoralizing and belittling.

Parents have been putting too much of their vitality into their work and dissipations, and are endowing their offspring but sparingly with this gift. The control of the children in the home has been slight, fitful, and unnatural, and hence the greater need of that firm intelligence which secures unhesitating obedience in the schools, and thus saves authority from being defied. We have been breeding in the children a Bohemian spirit and tone that are peculiarly unwholesome. The desire for striking apparel, the ambition to be before the public, and the anxiety to be entertained have become so strong in many young people that they have lost all the sane ideas they may have had of what life is. If we can breed in them the desire to be responsible for some service, they will travel the streets less; they will be found in the home more; they will be less restive under restraint, more willing to obey directions, less devoted to excitement and frivolities, and have a larger interest in study, thought, and work. They will place a proper estimate on knowledge, wisdom, virtue, and have some sense of the serious duties of life. They will learn thru reading, study, investigation what things are to abide, and what are for but a moment.

In schools, as well as in factories, the machinery of a past age cannot be used to do the work of the present time. When a system is perfected, it must go. It was a blessing while growing, but proves a curse to teachers and children when grown.

In the olden time the cares of the home, farm, and shop were means of grace, and an opportunity for training, which gave our people their great capacity for work and endowed them with those marvelous staying powers which have made them the wonder of the world. May we never reach the day when the pressure of a button will lift the boy from his bed, induct him into his clothes, pass him to the dining room, introduce the food into his stomach, transport him to school, furnish him with knowledge in a digested form, and graduate him, wanting in those qualities which are necessary to strong, righteous manhood!

There have been too many units or centers around which the work of the school has been grouped. We are discovering that it is harmful to the child to have his attention and thought divided between eight or ten different subjects in any one day. The routine of the school is being simplified, the work of the children is being improved, as we select a smaller number of subjects, push them clearly and strongly to the front, and group the incidental work which we are trying to do under a few heads. Many things can be done, and well done, if in the doing we connect them with the things to which they belong, and do not give them undue prominence.

We have too long misconceived the scope and purpose of the common school. We are beginning to see that its work lies along a few well-defined lines. If the child can read, in a true sense of that term; write, in the large sense of the word, and perform computations with facility, he has developed more power and knows more things worth the knowing than many children possess after passing thru and having passed thru them the elaborate and confused mass of details which go to make up the outline of work in many of our schools.

We are evidently close to a day when we are to sober off, recover our sanity, and realize that children are injured by being rushed thru things and rushed from one thing to another. It is becoming clear that a child needs the opportunity and training which will give him poise, skill, strength. He cannot get these in a school where he does a little of everything, and never does much of anything. He is to get it in the schools where he has an opportunity to settle down to the deliberate, continuous, and close study of a few subjects, follow these out in their tributary lines, and in these tributaries get the training necessary to breadth, vision, and a cultivation of all those powers which we are seeking to evolve thru the studies which have come into the schools within the last third of a century.

We have also been making the mistake of thinking that the average child can profit by the intricacies of the Hegelian philosophy and the transcendental mysteries of the Herbartian pedagogy during his grammar-school course. We are coming to see that involved abstractions belong to maturer years, that it is possible to imbecile children by anæsthetizing them with facts and ideas beyond their powers of comprehension, and beyond their capacity to hold in solution. It is evident that we are seeing the evil effects of too many studies, too great elaboration of details, and too intricate and difficult investigations. In a word, the children need less theoretic philosophy and more practical activity.

I trust we shall soon place a proper estimate on the value of quiet, serenity, steadiness, and shall see the evils of irritation, excitement, restlessness. We know somewhat of the harm which has come to us from being everything by turns, and nothing long. We feel the need of those strong qualities which come as a result of repose, meditation, thoughtfulness. We are learning that what we have has been acquired by effort, that what we are to attain we must conquer in the same way; that the best thing which we have gotten from the six thousand years of struggle is the strength which has come thru experience. We are giving so much instruction that the children are incapable of learning. We do so much work for them that they are losing the desire and capacity to labor.

I hope we are discerning that it is not a part of the teacher's duty to furnish brains for the pupils, and that he does harm rather than good when he presumes to do their thinking; for children, like other human beings, do their best work when they have some incentive and responsibility. It is dawning upon us that their personality must be respected, their judgment recognized, and their aptitudes considered, if they are to grow into what it is possible for them to become. We are gaining courage for our work by seeing more years into the future than the records tell us we have lived. The best instructor of youth is he who has the fine perspective of the historian, the rare astuteness of the annalist, and the calm vision of the poet.

The good day cannot be far in the distance when we shall help children to feel the subtle life that quivers on the canvas, breathes from the printed page, and pulsates in bird, and flower, and gem. Their eyes will be so opened, their hearts will be so much in tune, that "they will lose no opportunity to see anything beautiful, for beauty is God's handwriting, a wayside sacrament. They will welcome it in every fair face, every blue sky, every tinted flower, and thank Him for it who is the fountain of loveliness, and drink it in simply and earnestly. To them it will be a charmed draught, a cup of blessing;" and thus they will grow to feel a just sympathy with all worthy effort, a true harmony with all life, a full recognition of all beauty, and a prompt hospitality for all revelation. The faster we move in the direction of making the school the intellectual and art center of the community, the sooner shall we do one great service for the people.

The teacher of today is learning that she must help her pupils to see that hatred, jealousy, untrustworthiness, make those who are guilty of these offenses small, mean, and ignoble in thought, feeling, and life; that he who is sympathetic, glad of the success of others, ready to add to their joys, and eager to promote their prosperity will receive a greater blessing than he bestows; that he is best who believes and says the best of others; that gentleness, uprightness, and thoughtful sympathy bring to their possessor the sweetest joys known to this life.

Our children are to have a chance to learn that altruism results in happiness, as selfishness ends in misery, and that one cannot afford to spend in unworthy rivalries the strength which should be given to winning honest success. The controlling sentiment of the school is beginning to condemn the act of the wrong-doer. We are ceasing permanently to injure the children by being consciences for them. They no longer feel that the right way is always to be pointed out, and that so long as they do not run against barriers set by their instructors, they are on the safe track.

It is dawning upon us that it is unfortunate for children to be old beyond their years; to know things which it is unwise for them to know; and to be thinking of sex relations long before such thoughts should enter their minds.

It is equally harmful to lose their relish for, and interest in, the duties which make up a large part of their lives, and to be more anxious to fill an inferior place in some store than they are to continue their education and fit themselves for useful places in society.

We are seeking for teachers whose manners, tone, carriage, and speech are in harmony with those found in our cultured homes. We no longer desire a tyrant or look for a czar. We are trying the experiment of conducting our schools on the same principles on which intelligent and refined parents direct their homes. We are discovering that children who are familiar with the conventional forms of good society have one more reason for respecting themselves. Experience has taught us that self-respect helps to save the child from temptation and stimulates him to live righteously. Awkward movement and uncouth expressions have prevented some from entering good society and driven others from such associations. The child of the future is to have the advantage of associating with a person who is a gentleman. We are learning that "a gentleman is a gentleman the world over; loafers differ."

We read of an age when it was the work of the scholar to study books. We are enduring the horrors incident to a furor about the study of things. A few have faith to believe that we are approaching an era when we shall exalt the study of life to a commanding place. Experience and a larger wisdom have reversed 95 per cent. of the decisions of reason, and confirmed an equal proportion of the prophecies of the poets. Pope, Emerson, Balfour, and Kidd unite in teaching the value of intuition as a guide in discovering ourselves, revealing others, and making the most of the best in both.

We are becoming wise enough to regret the effort made in the school of today in appealing to the senses, and training this quintet of modern deities. So much time is given to this work that the invisible is not seen, its existence is often denied, and its champion is scoffed at by those who are so small that the places they are supposed to occupy are vacant before they leave them.

It is becoming clear that we must take in, as we take in the breath of life, the prophecies and revelations of the poet and the artist. It is life's greatest work to appreciate life. What the masters have given us furnishes food for the soul. Using these means, life will be enlarged, made abundant, and without them we are dwarfed, crippled, starved.

Schoolroom instruction, as well as conceptions of life, are beginning to have perspective. A fine perception of the fragrance, color, delicacy, and unwritten wisdom of the flower is worth more than a scientific knowledge of the seed from which it grew, and the minutest knowledge of the stock, branch, and leaf which hold its life. Self-control, concentration, endurance, application, appreciation, insight, receptiveness, responsiveness, are being recognized as on a higher plane than a knowledge of insignificant towns, unimportant dates, and meaningless definitions.

We have spent many years in developing the head, training the body, giving skill to the hand. During all these ages the heart has been left to seek its own nourishment, and we have done but little to stimulate, mold, or use the great emotions of youth.

The poets of this century have voiced the feelings, told the story, of the heart. Like all things in this world, the revealer of life comes when he is most needed. We are awakening to the fact that it is not what we know, but what we feel, that makes life worth living; that he lives most who loves most; that, while we can live without money and honors, we cannot live without love; that worthy desire is a disinfectant, saving us from narrowness of thought and the evil influence of degrading surroundings.

We are coming out into the clear, and our heart and eyes are being opened. We are beginning to stand foursquare to all the world and every wind that blows. It is being revealed to us that, while the intellect is the engine, feeling is the steam which makes it go.

We are beginning to realize that we are not educated until we can appreciate instinctively, and hence unconsciously. The teacher of today feels that she has not done her full duty when she makes the pictures in a great poem "stick out," but unconsciously the child must be led to recognize the divine within and above him. Literature is beginning to perform this great service. Art is beginning to do this great work. The emotions are coming to be recognized as filling a large place and exerting a noble influence in our lives. We are beginning to understand that disorderly and uncomely school yards, caricatured outbuildings, and unsightly schoolhouses are a means of moral poison and mental degradation; that when these surroundings are fit and inspiring, our children will understand the fine sentiment which caused the old Scotchman to remove his bonnet every morning, as he stood in front of his cottage and bowed his head reverently in the presence of the scene that unfurled its beauty before him.

We have reached a point in our progress where we are willing to spend less time on permutations, foreign exchange, cube root, location of unimportant towns in Africa, imbeciling definitions, stupefying details, and belittling non-essentials, and give more intelligent effort to developing in the children a love for home and kindred by studying Hovenden's "Breaking Home Ties" and Whittier's "Snow Bound;" a love of country by reading the speeches of Patrick Henry, Webster, Lincoln, and Sumner; an old-time reverence and devotion by studying the Madonnas, "Crossing the Bar," "The Recessional," the fifty-third chapter of Isaiah, the ninetieth Psalm, the twelfth chapter of Ecclesiastes, and the revelations of St. John.

We are gaining a respect for labor by drinking in the wisdom of Millet's "Sower," in which he shows that the laborer can be a prince and nobler than he who rides at the head of a troop of cavalry. Such pictures as the "Angelus" tell us the history of a great church and its usefulness in developing reverence, devotion, tenderness, gentleness, attuning the hearts and giving grace to the bodies of its devotees thru centuries of training; and we are seeing that all this can be told more clearly thru form and color than in word and paragraph.

Love of our kind and sympathy with their trials are coming to us thru the "Chapel of the Hermits," "The Day is Done," "The Present Crisis," "Eternal Goodness," "The River Path," and "The Cotter's Saturday Night." We are learning to read the wisdom of fragrant nature thru the daisy and mousie, the primrose and daffodil, as found in the field and glorified by the poems of Burns and Wordsworth. We are beginning to feel, if not see, that all this means more and better for the children than the eternal grind which is responsible for much of the hatred of school by the children, and the imbeciling influence of not a little of our teaching.

There is coming again into the hearts of the people that sentiment which was a controlling power in the earlier days, when the parents are willing to make great sacrifices that their children may be trained to fill better and larger positions than those into which they are born. They are willing to stay in the valleys while their offspring climbs to the heights, and they take pride in holding the foot of the ladder steady while the child is climbing to the top.

Experiment and experience convince us that, as soon as we do as well as we know, we shall breed children who will live up to Channing's high ideal:

> To live content with small means; to seek elegance rather than luxury, and refinement rather than fashion; to be worthy, not respectable, and wealthy, not rich; to study hard, think quietly, talk gently, act frankly; to listen to stars and birds, to babes and sages with open hearts; to bear all cheerfully, do all bravely, await occasions, hurry never—in a word, to let the best, unbidden and unconscious, grow up thru the common: this is to be my symphony.

In the meantime let us repeat reverently:

"Lord God of hosts, be with us yet,
Lest we forget, lest we forget."

INFLUENCE OF ENVIRONMENT ON THE DEVELOPMENT OF UNITED STATES HISTORY

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Man may rise superior to his environment, but environment is none the less potent in modifying the man. When for the first time Froude sailed along the coast of Norway, he exclaimed: "The whole history of the Norse people is now before me." The deep fjords, with their sinuous passages; the rugged, island-girt coast; the inhospitable climate—all these, standing out in panoramic array before the student of history, formed a most magnificent object-lesson. The surroundings had made the character of the people. The features of the landscape were all on the most stupendous scale. The towering crags and pinnacled islets were washed by swift, treacherous currents and beaten into shape by gigantic storm waves. Tempestuous tides ebbed and flowed thru the sheltered fjords, and the walls that girt them were frowning battlements fitted alike for offensive or defensive strategy. Behind them there lay a coast slope, timber-covered here and rocky there, but everywhere traversed by lofty ridges and gashed by deep cañons.

Environment had made the Norse people just what history has described them. That magnificent region was not an area in which the arts of peace could develop, and, indeed, the surroundings were not of the kind that encourages dilettante pursuits. It was a struggle for existence between barren rocks on the one side and battering storm waves on the other. And what a race of giants was born of such conditions! We speak of them almost contemptuously as pirates and sea robbers nowadays, but each man of them, pirate and robber tho he may have been, was every inch a king. Such surroundings make neither effeminates nor cowards; it is an environment whose products are always men. The "wicks" of Great Britain bear testimony to the time when blood and Danegelt were alternatives. The name "Russia" carries us back to the time when Rurik and his hordes overran the land of the Sclavs; in fact, but a small part of the northern lands seems to have escaped the ravages of those murderous hordes.

Now turn southward across the Baltic: where can there be a stronger contrast? Marshes, shoals, and shifting sand dunes are the only relief to a surface so flat that the sluggish streams can hardly push their way along the beds of slime and ooze. Storm clouds, pouring forth torrents of rain, divide their power with the fierce north wind that covers the sea with white caps and drives the flying scud miles inland. Mud hovels are scattered along the banks of the streams, and in them, herding like swine, is a fair-skinned people, clad in pelts. They are Teutons like the Norse, and of them. They are a gluttonous lot. Look at them in their huts—Saxons, Danes, Angles, Jutes—lump them all together in one, for they are one: they are hardly a remove higher than the swine with which they herd. But the wild boar is not to be despised. He has brawn and endurance; he has courage and fights till the pike pierces his heart. The Saxon, too, knows no alternative but victory or death. Slash him, pierce him, disembowel him—he utters not a sound; he simply fights on. The wild boar has cunning; the Saxon churl has all this, and a gleam of intelligence beside. The powerful animal is there, and there is good soil in which resides the germ of an intellect.

South of the Balkans another people is emerging from barbarism into civilization. They have acquired an alphabet, and another thousand years shall behold the most wonderful intellectual development the world has yet seen. Turn the pages of history quickly. Troy has fallen; Athens has become the center of a great civilization. The little band of Æneas has grown to be a mighty people that possesses the whole Mediterranean basin—the great circle of the lands. And a magnificent people they are. To the intellectual growth of their Greek ancestors they have added the science of war and the arts of peace; better yet, they have evolved from their inner selves both the science and the art of a constitutional law that in later years shall govern the civilized world.

But their territory is too small for them, and they turn northward. Across the Alps are broad, fertile plains that, under the skill which goes with civilization, shall become the foremost granary of the then known world. Warlike Teutons guard that plain, and resist encroachment. For over five hundred years they are driven back again and again ; but the wild boar can be killed only — never conquered. Under his Roman tutors the germ of intellect is developing ; his time has come ; there is another awakening, and a new epoch of history is begun.

Turn the wheel of time another and still another thousand years : the Greek republic and the Roman commonwealth have passed away, and with their passing there comes out of Judea a little spark that shall kindle the whole world. To Greek ethics and philosophy, to Roman education and constitutional law, there are added the gentle teachings of the Nazarene. The spark falls within the breast of the Saxon swineherd, and the wild beast becomes a man in the image of the Son. Twenty-five hundred years have rolled by ; and when the curtain goes down at the close of the nineteenth century, two Saxon empires are dominating the world — one the old, the other the new. In each one the scepter is pointing to the words of the Nazarene : "All things whatsoever ye would that men would do to you, do ye even so unto them." Great Britain and the United States — they are the only commanding nations on the face of the earth in which the people themselves are the sovereigns. The old order has been reversed. The people are no longer servants of the king ; the king is the servant of the people.

The building of a nation may be grouped roughly into two periods — that of territorial growth and development, and the more important period of adjustment to environment. The two processes may be more or less concurrent, but, as a rule, adjustment is the consequent process and comes only when a sparsely settled region becomes one of dense population. Moreover, adjustment is the outgrowth, not of political, but of geographic conditions. In other words, the industries and economics of a people must be adjusted to geographic environment, or a certain amount of friction of necessity results ; and friction in adjustment to surrounding conditions is only another name for history.

By a very natural process, and one to be expected, the original colonies of the country became states, and the federated colonies the United States. Their boundaries were laid off without regard either to topographic or climatic conditions — and, indeed, under the circumstances, the importance of these factors could not have been foreseen. When our territorial expansion had brought us to the Pacific, sooner or later it became necessary to subdivide the acquired areas into territories, or embryo states. The question of environment was again, of necessity, overlooked, and the divisions were made in much the same manner as tho a 2 × 4 plank were pushed against a buzz saw, first longitudinally and then transversely. In the period of colonial history each colony possessed not a little political independence, and, as a result, a certain amount of individual sovereignty has been the heritage of every state. And inasmuch as we have laid off state boundaries without reference either to climatic or topographic conditions, it is easy to understand that, in many ways, a state sovereignty may increase the friction that comes with adjustment.

Critics often tell us that our forefathers should have made the lines of separation pass between the natural divisions of the country. True, but who is to determine what these natural divisions are — and how can one solve off-hand a question that requires, perhaps, a century for solution? There is, for instance, a New England plateau, and also an Alleghany plateau. Topographically they are a part of one and the same highland. No distinct line of demarkation separates them; yet their economic industries are such that, altho each is a region of manufacture, even if they were a thousand miles apart, they could not have a greater diversity of social conditions. At one time commerce and the industries connected with shipbuilding were practically the only business of the coastward part of the New England plateau region. Why? Consult the topography of the coast, and that shall be the answer. The fjorded coast line of the New England states, extending into deep water, has provided an abundance of natural harbors. On the other hand, the gently sloping plain of the South Atlantic states, extending out beyond the shore line, is a barrier to all approach. The one invites commerce; the other forbids it. Thus, commerce went to the North Atlantic coast. Then, too, back of the Maine coast there was an abundance of pine timber unsurpassed for shipbuilding. What could have been a wiser plan than to have built their industries as they did?

But one cannot always look far into the future. Who could have foreseen that embargo that came with the war of 1812, with the tremendous store of capital thrown into idleness, and the great fleet of ships rotting at anchorage? Or who could have peered deep enough into the bowels of the earth to see the hidden beds of coal in Pennsylvania, or the iron of Michigan that was to be fashioned into the ships of the present day?

The man had adjusted himself to his environment; but, thru no fault of his, the conditions had changed, and a readjustment was necessary. So the idle capital sought the aid of water power, and the New England plateau was quickly dotted with factories. This time the boundaries were considerably enlarged, and for years the adjustment to new conditions was eminently satisfactory, until changed conditions should demand a better one. The New England plateau became the great center of manufacture devoted to products requiring great manual skill. The

Appalachian plateau, from the coal fields southward, became the great region for the manufacture of iron and steel. Natural boundaries, therefore, circumscribed the two regions. Into the latter an army of Huns, Poles, and Czechs were drawn — about everything, in fact, unfitted for citizenship that a dragnet could enmesh from the most unenlightened part of Europe. The labor required was applied to the shafts and dumps of the coal mines. The great mass of it was fit only to swing a pick or shovel; and had it been of a higher grade of intelligence, it would have been unfit for this. But in the New England region, on the other hand, the great majority of laborers were skilled citizens, trained in the best schools and colleges the country could produce. Is it strange, therefore, that the historic development of the two regions has been unlike? Yet it was purely a question of environment. The barrier line, the boundary between the two, was one neither of climate nor of topography, but it was more potent in molding the history of the two regions than tho it had been a Himalayan range.

I am inclined to think we do not always apprehend the full meaning implied in the terms boundary and barrier. The Mississippi, for instance, is a natural boundary between various states, but it is not a barrier. The Cascade mountains are a barrier between eastern and western Oregon, but not a boundary. The Chilean Andes are both a boundary and a barrier, while the Ural river that is supposed to separate Europe from Asia is neither one. The 2,000-feet contour in the western United States, altho an imaginary line, is practically the physical boundary between the food-producing and the arid region of the West. The Sahara, and not the Mediterranean sea, is the true boundary and barrier between Europe and Africa; and the high, arid plateau surmounted by the Hindu Kush in the same manner forms the true boundary and, at the same time, a barrier between Europe and Asia. These desert regions separate Aryan and Semitic peoples from the black race, in the latter instance, and occidental from oriental civilization, in the former. The regions themselves are marked here and there by political boundaries, it is true, but the desert barriers themselves are natural boundaries that the energies of man can never annihilate.

But not all natural boundaries, so called, are effective as means of separation. A body of water is rarely effective as a barrier, and if it happens to be a navigable river, it is a very poor boundary. River boundaries have almost wholly disappeared from the map of western Europe. So long as the Rhine lay between France and Germany, just so long was strife between them inevitable. The right and the left halves of its basin form a unit, and the river joins rather than separates them. Not half, therefore, but the whole of the watershed must belong to the one or the other. Even a wide sea does not always form an effective barrier. Intercommunication, like water running from a higher to a lower level, is apt to follow lines of least resistance. Hellenic civilization could not readily push northward of the Balkans, but it easily crossed the Ægean sea and intruded upon Asia Minor. A generation ago the Atlantic ocean was four weeks wide. Now, with the help of Bessemer steel, and twin screws, and triple expansion engines, it is less than six days wide.

Thus we see that, with the great progress in methods of communication, some of the most formidable barriers to intercommunication little by little have been surmounted, and with their storming has come the friction of readjustment, and new epochs of history are beginning.

The western half of our own country presents an aspect that is not found in any other part of the world—if we read from the maps only. Where else in the world shall we find a map of political divisions whose boundaries are fiat lines drawn along parallels and projected on meridians? And when we read below the surface, what do we read? Simply undeveloped history. There they are—a long category of events, each one tacked firmly to a geographic cause. The population is sparse, at present, and the resources are either lying idle or going to waste. Here and there, however, with the vanguard of settlement, clashes are occurring, and almost always the clash is over water rights. Water is scarce in this region, and its equitable distribution must be the basis of agricultural economics. The impounding and storage of storm-water streams presents no great difficulties. But suppose the torrential part of the stream where the storage reservoirs must be built is in one state, while the cultivable part of the watershed is in another—a resulting conflict is inevitable, and the number of them is constantly increasing.

The moral is obvious: fiat boundaries are only temporary expedients, and when the economies of this region have been adjusted to produce the best results, the new boundaries will follow the divides between the adjacent watersheds, and the latter, properly grouped, will become the units of political organization—in other words, political organization must become subordinate to topographic and other conditions of environment.

A casual inspection of a map of the United States shows a number of well-defined areas, each an economic region of more or less importance. A more careful study, however, shows that these regions are resultants of natural causes—climate, topography, or resources; as, for instance, the Alleghany plateau, with its coal and iron; the New England plateau, with its topography suited both for light manufacture and commerce; the arid region, restricted to mining and grazing; and the Pacific coast region, fitted for almost anything under the sun. Then we have the broad central plain, with a domain so great that it will hold nearly a quarter of the world's population, and a soil so productive that it will feed them.

Let us consider this great area. Already, in round figures, it has made a record in economic history. It produces one-quarter of the wheat, four-fifths of the corn, and nearly five-sixths of the cotton product of the world. The carcasses of nearly one hundred million animals are yearly converted into meat, and of this amount more than forty million go to feed the people of foreign lands. It is flanked on the east by fields that produce one-third of the world's coal and iron; on the west by rock veins that yield one-third of the world's supply of gold and silver. The enormous yield of food stuffs has a certain interpretation, namely, great density of population; the coal and iron ore quite another, namely, unlimited power.

The topography of this region has resulted in many surprises. When grain farming was restricted to the hillsides and valleys of the eastern states, the old-time cradle was good enough as a harvester, and the hand flail could easily thresh the grain. But the broad prairie farms of the West required something better, and when the westward movement of population had filled the Mississippi valley, mowers, reapers, self-binders, headers, stackers, threshers, followed one after another in quick succession. They were simply outgrowths of topographic conditions. There is no economy except economy of time, and so steam-gang plows supplanted the old plow. The railway service proved insufficient, and so the Bessemer steel rail supplanted the iron rail; the eighty-ton locomotive that of forty tons; the automatic brake the hand brake. Sailing vessels were too slow; the wheat, cattle, and other food stuffs grew faster than they could be carried to foreign shores. So the steamship was pressed into service. But the old-fashioned steamships were likewise too slow and too small; so we made them twice or thrice, or even ten times, as large; built them first of iron, and then of steel; put in steel boilers that would stand 160 pounds' pressure, instead of forty; put in a screw instead of paddle wheels, and if one screw did not drive her thru the water fast enough, we added another. And why? It was fortuitous topography and climate; man was taking advantage of environment.

From the great lakes to the gulf this broad area possesses a likeness of topography that is marvelous. From north to south it is a plain having a slope of but a few feet—a stupendous farm, in which groves of young timber alternate with cultivated fields. North, south, east, and west all the conspicuous features are monotonously alike. Yet, in spite of the unity and continuity of the surface, there was to be erected a barrier that in time should reach from the Atlantic to the Rocky mountains —the barrier, at first, scarcely more of an obstruction than an imaginary line, because a very ugly fiat line, and, finally, an obstacle that almost wrecked the nation. Two factors were concerned in it—fortuitous climate and the steam engine on the one hand, topography on the other. The adaptability of the soil and climate to cotton culture is easily understood: for the part of the steam engine we must look across the water to ancient history. From a period long antedating written history, Aryan peoples have been famous as weavers and spinners, and the English people were no exception to the rule. The long-drawn battle between the feudal system and the factory had practically been over for a century, when a new power appeared in the field—a power that was destined in a century to revolutionize the social and economical status of the whole world. This was no more nor less than the application of steam to the development of energy. In 1765 Watt made the first successful steam engine. Prior to this time the English people held a monopoly in the manufacture of woolen and linen textiles; with the invention of the steam engine there came into the field an enormous increase of power, with no work for it to accomplish. But cotton cloth had already been brought from India to England; and it was worth about fifty cents a yard—hand-woven and hand-spun.

John Bull is very long-headed, and very capable. He wrested that industry from its natural habitat and carried it to England. Nowhere in the history of economics has there been another such remarkable dislocation as resulted in this case. The mills were built in England; the cotton fields were moved to the United States. There was some trouble in finding a way to separate the cotton from the seed, but Yankee ingenuity overcame that. This accomplished, there was now a region called the southern states. Climatic conditions had prepared the ground, and the foundation stones of the barrier were laid.

But with eastern competition, and labor worth from two to five cents per day—the wages then paid to Hindoo coolies—the rivalry of necessity must be sharp. In order to compete with eastern labor we imported the native African, making a slave of him. The experiment seemed to be highly successful, but human slavery was obnoxious to the freeman, so at the same time we added several courses to the barrier that was fast growing higher. The man was apparently superior to his environment; he was building up the barrier more unwisely than he knew.

All the while the energies of the people were so actively engaged in circumscribing the cotton-growing area, a train of events was bringing about certain important results in the states north of Mason and Dixon's line. Topographic conditions—and again the man was governed by his environment—had almost shut out every employment except manufacture and commerce. As a result, a highly trained, skillful, and well-educated people became the body politic of the northern states. Their skill is attested by the fact that, whenever foreign-made and home-made articles came in competition, all other conditions being equal, the latter took precedence because of their merit. But in the public eye merit cannot or will not successfully maintain itself against inferiority; moreover, cheapness of price is usually the criterion of success. The New England manufacturer was, therefore, confronted with a problem: he must compete with goods made by operatives working at a lower rate of wages. He must, therefore, either lower the rate of wages paid his own employés or induce the government to protect them against foreign competition. That protection of some kind or other was necessary there can be no doubt; every government owes that much to its people. In this case, however, the protection took the form of a tariff on imports. Whether this form of protection was the most wisely chosen is a question the discussion of which is out of place. It certainly had the effect of building up and increasing the manufactures of the country to a marvelous extent; it was likewise a grievous burden upon all sections of the country in which the pursuits were strictly agricultural. As a result the unnatural barrier grew, until it practically separated the two regions into hostile camps. All the legislation, no matter how well intended, sooner or later reacted in a way to increase the bitterness. In intensifying the animosity growing out of social causes the absence of railway communication exerted not a little influence. A casual examination of a railway map of that period discloses a remarkable condition. Practically all the trunk lines extended east and west; a gridiron of roads was there, true; but something different was wanted. Reading between the lines, such an arrangement allows but one interpretation — there was a woeful lack of intercommunication between the two sections; the barrier had served its purpose only too well.

It had reached a condition where nothing short of catastrophic results could follow its destruction. The time came. The barrier was shattered to its foundations; but in the wrecking of it there went out almost a million of lives, and it cost over six billions of dollars to extinguish them.

We are apt to refer to the Civil War as a result of slavery. That such an abhorrent thing had much to do with it as an exciting cause cannot be denied. We may also thank the God who led Israel out of bondage that slavery was wiped off the continent when the war ceased. Let us look a little deeper under the surface: was slavery and its extension the real cause? The student of history tells us better; behind the slavery question there was the more potent one of tariff, and in this question lay a main issue of the controversy. Let us probe still deeper: was the tariff question the real cause? Most certainly no; behind the tariff was a factor still more potent. It was environment. Topography had made the one section a region of manufacture; climatic conditions had made the other one of cotton growing. So diverse were the two that legislative enactments which encouraged the one were apt to be hurtful to the other, no matter how they were applied. On both sides the man showed himself inferior to his environment, and for a long time it seemed as tho in neither case would he be able to adjust himself to it. It was again the old story: friction to adjustment was making history.

The Civil War was not the end of the barrier; it was merely the shattering force that made removal possible. A train of causes put slowly into motion was required for the latter. The southern extension of the Appalachian highland entered the cotton-growing area in the form of a wedge. This highland, not being a cotton-producing section, was rather against than in favor of disunion, and, at the close of the war, was very quickly "reconstructed" in all respects — save possibly the proper observance of the internal-revenue laws. From this region the wreckage was easily cleared away; and the reasons therefor, it may be seen, are due to its topographic character.

In various parts of the South there were considerable areas that, so far as cotton is concerned, were worn out. They were not unproductive, however, to wheat, and for this reason a northern industry not only invaded the cotton region, but it found a vigorous existence there. With it there came an increasing acquaintance between the two peoples. The northern mudsill farmer proved to be a very well-disposed fellow; the southern fire-eater carried a warm heart just above his revolver belt. Thus still more wreckage was swept away.

Then came the discovery of coal and iron in the southern Appalachians, and in a trice the whole country began to rub its eyes — Atlanta, Birmingham, Anniston, Lynchburg; the smoke is pouring from hundreds of stacks, and out of the huge molds white-hot ingots of Bessemer steel are dropping. There is no time for war talk; the Yank and the Reb are now working side by side, making steel rails and machinery instead of cannon and armor plates. The wreckage has been cleared away from a wide swath, and the stream of commerce is flowing thru it as if at flood tide.

But the hum of the cotton mill is growing louder and louder in Dixie. It is getting southward from the New England states, and with each turn of the master wheel more and more wreckage of the barrier is swept away. It was a great dislocation of an industry when cotton manufacture went from India to England; it was quite as bad when it went from the cotton fields of the South to the New England states, because, by the very nature of things, the mill and the plantation should not be far apart. The man is discovering his error of environment, and each day finds him adjusting himself more wisely to it. Almost forty years have come and gone; compare the railway map of today with that of four decades ago; the gridironing is no longer apparent; it is a chequer-board development now; and each north-and-south line has swept away its share of barrier wreckage, bringing the people closer together. Topographic conditions invited them long ago, but the man was not so wise then as now; wisdom has come with bitter experience.

Social conditions have also softened under the mellowing touch of time. Even the campfire reunions are changing. Formerly it was either all blue or all gray; now it is both blue and gray. Churches are responding to the word of the hour, and the distinction "North" and "South" is gradually being buried, never to wake to a resurrection call.

So, year after year, the wreckage was swept away, until its existence lingered only in the memory. But memories even are sometimes bitter. It needed a time and a cause to take the bitterness of memory away. They came suddenly, like a thunder squall out of a clear sky. It was again a war for humanity's sake; and with the blast of the bugle there came for the first time in our history a united nation — no North, no South — just one great country.

THE GEOSPHERES

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Perhaps it is my first duty, as it is a privilege, to offer you a word of welcome on behalf of the society which I have the honor to represent — one of the institutions of the national capital engaged, in its own way, in educational work. Speaking for that society, Mr. President and ladies and gentlemen of the National Educational Association, I bid you a cordial welcome to Washington, and place at your disposal all the facilities which are ours.

Before leading you away from the earth's surface, which has been so admirably described by the last speaker, I wish to confess that I labor under a certain embarrassment. In the first place, I am attempting to speak for another man, and on his subject. The subject was chosen by Major J. W. Powell; first an educator like most of you, next a soldier who left an arm at Shiloh, next the explorer of Colorado cañon — the boldest piece of exploratory work in the history of our country — then a geologist and long director of the United States Geological Survey; at the same time an ethnologist and founder of the Bureau of American Ethnology; and from first to last a philosopher, one of the most vigorous thinkers America has produced. It is but natural that I should shrink from discussion of a subject developed by so vigorous a thinker, and selected by him for presentation before you in his own inimitable way.

Again, I belong to the class of knowledge-makers who most feel their own limitations in appearing before those who assimilate and apply knowledge, placing it within reach of the people, and thereby performing the real work of raising humanity from plane to plane as time goes on; I apprehend that my ideas may seem vague and my expressions obscure, but I confidently appeal to your intelligence to aid in making the ideas clear and useful to the multitude of American youth for whom you stand sponsors.

First, as to definitions—definitions rendered the more necessary for the reason that the essential ideas which I wish to express have not yet found their way into the dictionaries. Since early in the history of knowledge, men have recognized the atmosphere, i. e., the body of air above the earth. At first the recognition was vague; it became more and more definite as time went on; and now educated men and women and children know the atmosphere as a gaseous envelope surrounding the solid earth, an envelope composed of a complex mixture of substances, chiefly oxygen and nitrogen. This atmosphere is one of the geospheres the outermost of four.

Since the beginning of knowledge, too, men have perceived the waters of the earth; and, as time has gone on, they have recognized more and more clearly the substantial unity of the standing waters of ocean and bay and lake, the running waters of springs and rivers, and the solid waters of arctic and antarctic snows and the glaciers of mountain and pole; and they are coming to extend the unity to include the aqueous vapor of the air, one of the constituent gases of the atmosphere. Water is a definite mineral substance existing in three forms as solid, liquid, and gas, tho chiefly in the second form; it constitutes a hydrosphere—the second of the four geospheres—covering the greater part of the solid earth and covered by the greater part of the atmosphere.

Human knowledge began with recognition of the solid earth; as time passed, the knowledge became definite thru the endless interactions between human mind and human environment; and today most intelligent people recognize a terrestrial sphere, beginning with the soils and rocks beneath their feet, passing beneath river and lake and ocean to the antipodes, and extending from equator to pole in a spheroidal mass forming the visible, solid part of our planet. Now, it is only the superficial portion of this spheroidal mass which lies within reach of observation; this is the rocky crust of the earth, the object-matter of the science of geology; it consists of a wide variety of mineral substances, mainly combined in rocks of a specific gravity, averaging about 2.70. This earth-crust forms the lands of the earth and the basins of the oceans; all of the geographic and topographic features so well described by Dr. Redway are built up or carved out of it; the continents, the islands, the valleys, the mountains of the world represent this vast mass of rock matter, which it is convenient to call the lithosphere—the third of the four geospheres.

While observation of terrestrial things ends with the atmosphere and hydrosphere and lithosphere, definite thinkers find it necessary to form some idea of the constitution of the interior portion of the planetary mass at depths below the reach of direct vision. Now, knowledge of the earth's interior is gained, not thru geology, but thru the sister science, astronomy. You are aware that, within recent years, astronomers have reduced to system our sun, the planets and asteroids which circle about it, the satellites which follow the planets, and the long-mysterious rings of Saturn—the various constituents of our solar system; and the paths of the planets and satellites have been surveyed, while each of the bodies has been measured and weighed so that their volumes and densities are known with considerable accuracy. Let me indicate the accuracy with which this astronomical work has been done by saying that sun, planet, and satellite have been weighed with an accuracy no less than that of the grocer in dealing out sugar and tea, and that the orbits of planets, satellites, and asteroids have been surveyed as accurately as the roadways, and even the railways, of the earth's surface. The earth itself has been weighed, with somewhat less accuracy than the other planets, it is true, yet with sufficient accuracy to indicate that its mean density is nearly six times that of water (5.6±), or more than twice that of the known lithosphere. Accordingly it is known beyond peradventure that the earth has an interior portion much denser than the known exterior; and this somewhat vaguely defined part of the earth may conveniently be called a centrosphere—the innermost of the four geospheres.

In the light of these definitions, you will understand that my object in coming before you is not so much to say new things as to try to establish a new point of view. Knowledge progresses in two ways, which are interrelated, yet fairly distinct; the first is analysis, and the second is synthesis; the sum of knowledge is increased by analysis, while its quality is improved by synthesis. I am now attempting, not to bring new facts before you, but to put old facts together in a new way, and thus to carry you to a higher plane in the synthesis or generalization of a wide range of observations; and I am seeking to do this in such manner as to reflect the workings of another man's mind—the mind of the real author of this address.

Let us now consider the relations between the geospheres.

In the first place, the matter of the geospheres is unlike in state or physical condition. The atmosphere is almost wholly gaseous; the hydrosphere is for the most part liquid, tho in part solid and in small part gaseous; the lithosphere is almost wholly solid, tho a minute part is gaseous (chiefly as impurities in the air), while a small part may be liquid, under temporary and local circumstances; for the present the centrosphere may be considered a transolid. Thus the four geospheres represent the three well-known states of matter, together with a fourth state which is not certainly known from direct observation. It is the marvelously delicate interrelation between the three exterior geospheres that gives character to the earth as the theater of life and the home of humanity; for plant and beast and man are alike dependent on the lithosphere for the solid part of their bodily substance, on the hydrosphere for the greater part of their sustenance, and on the atmosphere for the breath of life.

In the second place, the exterior geospheres at least are, despite the differences in physical conditions, in some degree intermixed. The greater part of the atmosphere floats over the waters and lands of the earth as a thin mantle, growing more and more tenuous outward; an early estimate of its thickness was forty-five miles, but the American physicist Woodward has recently shown that the outer portion is much less dense than at first supposed, and that the total thickness of the mantle exceeds the radius of the solid earth. A small part of the atmosphere is intermixed with the waters of the hydrosphere, especially the running waters of rivers and brooks; another part pushes down into the lithosphere, filling interstices in the rocks and playing an important rôle in the chemical and physical changes ever proceeding in the earth-crust. In like manner, while the greater part of the hydrosphere exists in the oceans, lakes, rivers, snowfields, and glaciers, a considerable volume rises far into the atmosphere in the form of aqueous vapor, and a much greater volume permeates the lithosphere as ground water, or in still more intimate combination with the solid earth substance. So, too, the material of the lithosphere is in small part dissolved or suspended in the waters or afloat in the air; at the same time there is an obscure interrelation between the lithosphere proper and the centrosphere, manifested in volcanic and other phenomena, and perhaps in the presence of the metals among the rocks; for there are certain reasons (which cannot now be set forth) for regarding the centrosphere as an aggregation of metalloid substances, much as the lithosphere is an aggregation of lithoid substances. The blending of the exterior geospheres is especially intimate where the three are in normal contact, i. e., about the terrestrial surface on which men live and with which geographers deal; and the soils, the plants which subsist on the soils, the animals which consume the plants, and the crowning human organism which dominates all the others are products of the commingling.

Just as the geospheres are intermingled in material, so they are, in some measure, interrelated in normal movements. The atmosphere is an aërial ocean, ever astir with currents due primarily to the rotation and revolution of the sphere, i. e., to movements depending on the density and volume of centrosphere and lithosphere; the waters of the ocean are evaporated into the atmosphere, carried far in its currents as aqueous vapor, and then precipitated to flow back again as fresh water, while the body of the ocean is enlivened by currents set in motion by the ever-moving atmosphere, as well as by tides produced by rotation and revolution; the lithosphere is constantly destroyed and reconstructed by the moving waters of the hydrosphere, while the earth-crust is warped and continents are lifted and sea bottoms depressed by the obscure but potent movements of the centrosphere. So the normal movements of the geospheres are interrelated, and most of them, from the rhythmic rise and fall of the earth-crust thru which continents are built and destroyed to the trade winds and oceanic currents, may be traced to the motions of the centrosphere.

Let us now consider for a moment how the conditions and motions of the exterior geospheres would be affected by circumstances which at first sight might seem trivial; for thereby we may see more clearly how delicate are the interrelations on which terrestrial life and human activity depend. Suppose the temperature of the earth were raised, say, 200° F., what would follow? Your common sense, born of experience, tells you that much or all of the hydrosphere would cease to exist as such and become a part of the atmosphere; that the atmosphere would thereby be multiplied in volume and density, changed in substance, and modified in movements; yet that the lithosphere would remain substantially unchanged, save that some of its substance would be dissolved in the densified atmosphere. Probably the centrosphere would not be greatly affected; yet, even so slight a change in circumstance as an increase of temperature by only 200° would remove the hydrosphere from the earth and greatly modify the atmosphere.

Let us next consider the effect which would follow the reduction of the temperature of the earth by, say, 400° F.; something we should have been unable to do a generation ago, but which we can now do so easily by reason of recent experiments and discoveries in physics. You will remember that about a score of years ago Cailletet, of France, and Pictet, of Switzerland, began to liquefy different gases by the application of pressure at low temperature. Many of you know that this line of experimentation was continued by the distinguished chemist and physicist of London, Dewar, who liquefied one gas after another, until every gaseous substance known to man, including hydrogen, has been reduced to the liquid state; and, I am sure, many of you know that the American Tripler has recently improved on the work of our European cousins, and has learned to liquefy air in large quantities at low cost by the skillful application of pressure and artificially reduced temperature. Tripler's work, by the way, is worthy of more than passing note; for his advance has given mankind a new hold on the powers of nature, with a promise of practical applications yielding benefits much greater than were promised by electrical control when inventors first began to utilize electricity for mechanical and other purposes; but this is a digression. Now, liquid air is a little lighter than water, and boils, or evaporates, at about 312° below zero F. So we know that, if the temperature of our planet were to be reduced by 400°, the atmosphere would cease to exist as such, and would shrink to one-eighth-hundredth of its present bulk, and be converted into a hydrosphere. We know, too, that long before the reduction was completed—indeed, when the temperature fell to a maximum of 32° above zero—the hydrosphere would cease to exist as such, and would become a part of the lithosphere; for the waters of ocean and lake would be congealed (as we know from Tripler's experiments) into a dry, powdery mass of crystals, crumbling under blows or pressure, just as granite and limestone and other rocks crumble at our present temperature; the waters would become rock, added to the rock which now exists. By this transformation the volume of the lithosphere would be augmented by that of the present oceans, the present sea level would become sea bottom, and a lighter sea of liquid air (only a dozen or a score of yards in depth) would wash the frozen globe, leaving continents and islands rising above its surface in a geographic configuration differing not greatly from that of the present. Over this globe no air would float, save possibly a light vapor scantier than the aqueous vapor now borne in our atmosphere, and no man or beast or plant, no trace of life, could exist.

Consideration of the profound modification in the exterior geospheres, necessarily following changes in temperature which can only be considered as slight in comparison with the wide temperature range even of our solar system, aids us in understanding something of the conditions which attended the early stages in the development of our planet. The earth, as a whole, is apparently a cooling body, tho the rate of cooling may be—indeed, must be—almost infinitesimally slow. So the planet primeval must have been warmer, a greater part of its water must have been afloat as vapor in its atmosphere, which must have been heavy with vapors and the fumes of solids soluble in hot water. In like manner the changes necessarily produced in the geospheres by diminished temperature enable us to take a long look into the future and foresee the fate which awaits the aging planet—unless, indeed, this fate may be averted by aid of human ingenuity. There are many indications that the mechanism of the solar system—and, indeed, of the stellar system—is running down. We know that the water of the earth is going into new combinations from time to time as a constituent of the rocks of the lithosphere. We know that the water area of the globe is diminishing from age to age, as the eons run, for the clastic deposits with which geologists are most concerned were laid down in water, while those now forming are largely, if not mainly, accumulated on land. There are deserts on every continent today, while the record of geology indicates that during the carboniferous and earlier ages all the lands of the earth were fertile and humid. And just as the hydrosphere is going into the lithosphere by chemic absorption, as well as by interpenetration, so the commingled oxygen and nitrogen of the atmosphere are slowly separating and combining with the substances of the lithosphere, and probably also with the substance of the hydrosphere. The changes yield a glimpse of planetary history; they suggest a time when the now deep-buried centrosphere was enveloped only by heavy atmosphere, with no lithosphere save possibly its own scums and slags, and no hydrosphere save possibly viscid lakes of its own substance half liquefied by relief from pressure, like the lavas of later time; they raise visions of slowly segregating waters and accumulating rocks formed thru interaction between the condensing atmosphere and the cooling centrosphere; they indicate the differentiation of the geospheres in nice adjustment to temperature and other conditions. The changes, indeed, give a threat of ultimate absorption of air and water into the rocks, leaving a dead planet of centrosphere and lithosphere only, swinging helpless thru space like our frozen moon ; yet there is a faint promise in a fifth geosphere produced thru delicate interaction among the three exterior spheres of the earth, lying about the common boundary of the three, dependent on all, yet able (at least in some measure) to control their relations — a psychosphere, comprehending the scanty, but potent and ever-growing, mantle of thought which today envelops the world.

Just a few words more, if you please, concerning general relations among the geospheres. The atmosphere is a body of gas conditioned primarily by temperature; the hydrosphere is a volume of liquid conditioned by temperature and gravity; the lithosphere is a shell of rock conditioned by temperature, gravity, and a more complex chemic affinity than is found in the mixture air or the compound water; the centrosphere is a transolid and probably metalloid body, conditioned in ways that are not well known. The several geospheres combine to form a planet conditioned by temperature, gravity, chemic affinity, and perhaps other factors, which extend to other planets and satellites and suns of the cosmos. So the features of the geospheres, i. e., the characteristics of our planet, are largely determined from within; yet it is not to be forgotten that each geosphere contributes to the making of the others, and thus to the molding of the planet, and in some measure to the shaping of the cosmos. This has already been indicated incidentally.

Let us now proceed to consider a few of the interrelations among the geospheres which affect cosmic economy. We have good reason for supposing that the earth is a cooling body; that some of its primeval heat is constantly passing into space to affect (howsoever infinitesimally) other bodies; but do we know why the temperature of the earth is not lowered more rapidly — why the lowering is so slow as not to be detectable by the observations of history? We know that, if the earth were simply a ball swinging thru interstellar space, and cooling by the radiation of its heat into space, it would soon be refrigerated. We know, too, that in this case the temperature of its surface would be determined solely by two factors, viz.: (1) the temperature of the ball itself, and (2) the temperature of the interstellar space. Now, on examining our planet as an actual thing, and not as a figment of the imagination, we do not find that the temperature of its surface is determined, or even perceptibly affected, by its own proper heat. We do find that the temperature of the external earth is determined by the heat received from the sun. It follows, of course, that the earth is not merely a cooling ball suspended in cold space. On examining more critically the conditions determining our temperature, we find there are two, viz.: (1) insolation, or accession of solar heat, and (2) conservation of a considerable part of this heat for a time by a terrestrial mechanism. This mechanism resides chiefly in interrelations among the exterior geospheres. The most important conservative agency is the aqueous vapor of the air, which not only stores quantities of heat to be given off on condensation, but serves to check radiation from the earth into space. When the sun shines on the ocean, a film of water is evaporated, to be borne high in the clouds and carried far over the mainland; when it is condensed, a part of its heat is employed in raising the temperature of surrounding air, water, and rock; so that water, chiefly in the form of vapor, stores heat more effectively than any other substance with which we are acquainted. Still more efficient is aqueous vapor as a blanket checking evaporation; dry air is diathermous, but vapor-laden air checks radiation from the earth, as a garment checks radiation from the body. Since there is no part of the earth, even on the deserts and polar icefields, in which there is not an appreciable quantity of aqueous vapor in the air, this substance forms a clothing for the earth, determining its temperature, rendering it habitable, and making it what it is today, the stage of human activity.

There is another class of interrelations between the geospheres which I should like to bring before you, partly as a new discovery. As before pointed out, the rocks of the earth-crust or lithosphere are permeated by water in the form known technically as ground water or phreatic water. Now, one of our most distinguished geologists, Professor Van Hise, of the University of Wisconsin, has recently shown that this ground water plays an important rôle in changing the texture and structure of rocks, especially at depths where the pressure is great and the temperature higher than at the surface. It is a well-known property of water to dissolve certain substances, and its efficiency in dissolving many rock substances is greatly increased when the substances are subjected to pressure and heat; and, under these conditions, it also ionizes complex substances, i. e., separates them into their simple components, or ions. Accordingly, when moist rocks are subjected to strong pressure at high temperature, as is frequently the case deep in the earth-crust, the rock matter is dissolved at the points and planes of greatest pressure, and precipitated or redeposited at neighboring points and planes of less pressure; so that, for example, a crystalline cube of wet, hot rock matter may be permanently distorted by long-continued pressure on opposite faces, the crystals gradually yielding to the stress in the direction of the pressure, and elongating themselves in the orthogonal directions. Thru its property as a dissolving and ionizing agent, that portion of the hydrosphere which penetrates and suffuses the lithosphere has determined the texture and structure of most of our rocks; it has transformed the muds and sands and slimes of original deposition into shales, sandstones, and limestones; in some instances it has reconverted or metamorphosed these rocks into schists, quartzites, and marbles; still more significantly it has aided in remetamorphosing deep-seated rocks into lavas and other crystallines. This extreme effect of water is peculiarly instructive in that it reveals something of the character of the centrosphere, whose dense materials are brought within reach of observation only by water as a solvent and sublimant in the form of lavas, vein-stones, and other rocks of hypogean origin. There is reason for regarding the atmosphere as a differentiating and dissipating factor, and the hydrosphere as a unifying and conserving factor, both interacting with the centrosphere in such manner as to develop the lithosphere and convert it into the terrestrial home of humanity; but this relation need not be pursued for the present. Yet it is worth while to note a curious relation between lithosphere and centrosphere which is apparently controlled by the waters both of the surface and the depths. The two inner geospheres are in unstable equilibrium; this is shown by the occasional escape of the deep-seated materials from the foundation of the lithosphere (if not from the centrosphere itself) in the form of extruded lavas and sublimated vein-stones; it is shown also by the interminable heaving of the centrosphere manifested in continental oscillation and, to some extent, in the uplifting of mountains; it is indicated further, in still more interesting, tho obscure, fashion, by the apparent reduction of loose-textured solids to the denser transolid condition in provinces subject to loading thru deposition of exceptional volumes of sediment—e. g., the gulf of Mexico, the world's most notable province of loading, whose configuration suggests a hypogean "slump," which may be imitated experimentally by pouring a few drops of heavier and cooler liquid into a viscid liquid at the critical (or boiling) point; but this most interesting relation may also be passed over for the present with the simple suggestion —made by many phenomena— that the solid lithosphere and transolid centrosphere appear to be interconvertible at a critical point of temperature and pressure, much as the atmosphere and hydrosphere may be considered interconvertible in state and in substance on passing a critical point conditioned by the same factors, and that the hypothesis of interconvertibility explains some of the most puzzling facts in geology.

There are other interrelations between the geospheres, interrelations innumerable; time will not permit me to mention a tithe or even a hundredth part of them; yet there is one more relation which appeals strongly to those geographers who, like myself, always see the lands and the waters from the human standpoint, and I beg your indulgence for the three minutes required to set it forth briefly. My predecessor, Dr. Redway, has admirably defined for you the natural provinces of America, and shown you that the features of the land, formed during the ages by the work of running waters, shape the character of our people; I trust he will permit me to add a word to his theme, as well as to that of the thinker for whom I am speaking: In what we call the western hemisphere the land and the waters are so related as to form a broad continent, the North American continent, mainly in the North Temperate zone; during the ages the centrosphere has heaved and sunk, according to its wont, and has interacted with the atmosphere and hydrosphere in such manner as to produce a lithosphere of far-reaching formations, crumpled here into mountains, stretching there in broad plains, modified everywhere at the surface into fertile soils, charged often at the depths with mineral treasures—the whole a rich patrimony wasted on unintelligent aborigines until men of thought and action came to claim it. Then, since the lands were broad and fertile, agriculture spread more rapidly than ever before, more rapidly than would be possible under other conditions; next, the magnificent distances and rich produce compelled improved transportation facilities, and steam was harnessed more effectively than would be possible under other conditions. Meantime the broad problems presented by a broad land widened the views of men already inspired by political freedom, and America became a nation of inventors, a people of applied science; geography was studied more broadly than would be possible in a petty province; it grew into a science of geology, inspired by the breadth of the formations and their wealth in resources, guided by intelligence broad as the land, and today the geologists of this country lead the world in their science. The sister sciences were invigorated by the association; I have said that the solar system has been weighed and measured with unparalleled accuracy during recent years, and may now add that the work was done by American genius, and that today the shipping of the civilized world is guided by nautical almanacs based on this American work. Another science regenerated in America by reason of favorable conditions is anthropology. We have had better opportunities than the students of other countries for research concerning mankind; we have in Washington and in other cities representatives from every important country on the face of the earth, representatives of every living race, of every blood in human veins; then we have a wider range of culture constantly before us than any other nation, a range running from savage aborigines thru barbarous tribes up to the representatives of the kingdoms and empires from other countries, and finally to our own enlightened people, standing on the highest plane which mankind has ever attained—the plane on which social organization is based on intellectual freedom. We have every stage in human culture before us,and hence have been able to develop a broader and profounder science of anthropology. than the world has seen before. Especially during the last half century our country has sprung forward in the race for intellectual attainment, surpassing all other nations; and our application of scientific principles has kept pace with our development of knowledge. Today, if English promoters in Egypt want locomotives furnished on short notice, they send to America, knowing that, despite the doubling in distance, the order can be filled more quickly than in England; today, if a bridge is to be built more rapidly than the engineers of other countries can do it, American engineers are called to the task. Our progress in application has combined with our progress in knowledge to strengthen individual character, to produce a free and forceful individuality greater than other countries know—an individuality splendidly expressed in the faces before me. This exalted individuality is displayed in more perfect co-ordination of thought, in more complete union of hand and brain, than the world has ever seen before; it is revealed in moral uprightness and strength of character, in personal courage, even in that splendid marksmanship—the highest expression of co-ordination between mind and muscle—which is America's latest revelation to the world. The individual character of Americans gives national character to America; our patriotism, the spontaneous product of free minds, is broader and deeper than any sentiment brought out by royal edict; no other country could match the recent impulse which prompted the millionaire clubman of New York and the roving cowboy from Arizona to stand shoulder to shoulder in a war for humanity's sake. It is the unequaled individuality of free citizens, united and controlled by a dominant idea, that forms the basis of our indomitable social organization, a social organization faintly expressed by that co-ordination in army and navy which overwhelms opposition. Complete as is our co-ordination in military matters, it is much more perfect in civil life, in that unceasing conquest over nature toward which our deepest thoughts are bent; and our seventy million individuals, each a tower of individual strength, are kept in touch by telegraph and telephone and press, united in thought and purpose, knit into the strongest social and political fabric the world has seen. It is this social fabric, the expression of thought and purpose, which I have in mind in referring to the psychosphere, most delicate, yet noblest, of the geospheres, which seems to be enveloping our planet and commencing the control of the rock sphere, the water sphere, and even the air sphere for the good of humanity. And it is this conquest of the powers and resources of the exterior spheres, inspired by intellectual freedom and guided by liberal education like that which you dispense, that has placed America in the foremost rank among the nations of the earth.

DISCUSSION

GEORGE T. MURPHY, assistant superintendent of schools, St. Louis, Mo.—Professor Redway has given such a clear and comprehensive view of the influence of topography and climate on the character of the people of our country that no words of elucidation are needed. The presentation of the subject was so masterly that praise would be idle flattery.

It is but repetition to say that man, especially in his animal nature, is more or less influenced by physical environment. His natural surroundings, also, necessarily play some part in his *mental* development. How this is true may be measurably comprehended; but the why of it is a mystery as fathomless as the mystery of life.

That man may, and sometimes does, transcend his physical surroundings there can be no doubt.

Nature teaches the survival of the fittest. An eye for an eye and a tooth for a tooth is the rule. But as the spiritual nature, led by intellect, feeling, and will, grows strong, it scorns the old Mosaic law and grasps the extended hand of the Man of Nazareth. The history of the races and peoples of the earth points unmistakably to the fact that man moves on to his destiny in channels fixed by the immutable laws of God.

Nations and races differ one from another always for cause.

In America, with our brief history and our comparative freedom from inherited restrictions, the influence of topography and climate is most clearly seen in our national development. Perhaps nowhere on earth does man more readily harmonize with nature.

And wherever the growth of man meets with least resistance, there will be found the most rapid progress toward a higher and better civilization. The strong forces which aid *our* growth, and have so aided it thruout our short career as a people, are the favorable climate and inviting contour of the land in which we live. The variety of relief and a most salubrious climate are such as develop a hardy, independent type of manhood. Great plains and valleys, we are told, have a tendency to create despotic forms of government; but this tendency is balanced, in our land, by the elevated regions on the west and the highlands to the east, inclosing on two sides a vast empire in extent and in *all* that nature offers to incite man to greatness. The magnificent valley of the Mississippi will never wield its power despotically. Mountains, always the homes of freemen, are in such close proximity to this spreading valley that their influence on the temperament of the people is most perceptible. We, the inhabitants of this great interior plain, with the psalmist "lift up our eyes unto the hills from whence cometh our strength."

In no country on earth is the formation such that the people may intermingle so easily. Look at Eurasia! Broken into small valleys by transverse mountains, we hear a babel of tongues and behold a diversity of interests.

They seem to be unable to cross natural boundaries, while we, with the hardihood inherited from our forefathers and encouraged by the general relief, press onward over mountain and plain till we occupy the best part of North America. The sturdy mountain type of man mingling with the brave son of the valley; the hardy, calculating north type mingling with his impulsive, but courageous, generous brothers of the southland, make a combination of brain, blood, and brawn unsurpassed in all the world.

All thru our history, topography and climate controlled in our development as a nation. Physical relief rendered independence possible; the Ohio led us beyond the Alleghanies; the Mississippi river made necessary the purchase of Louisiana; the climatic limitations of the North and the greater fertility of the South developed diverse labor systems and consequent political antagonism; the mines of California turned the scales for the freedom of the slaves; the greater strength of the North triumphed and settled the secession question once and forever.

Diversity of natural resources develops variety of industries; this places a premium on ingenuity and inventiveness, stimulates traffic, and causes division of labor, which in turn results in the rapid growth of cities and towns, and brings prosperity thruout the land.

The tendency to divide the people upon parallels of latitude no longer prevails. The great waterways and the greater railways have no regard for sectional lines or the prejudice of man. It is easy to procure food, clothing, and shelter, and the era of art and the cultivation of all the refining influences is at hand.

In the United States, as nowhere else on earth, there is unity of design in the creative idea which brought forth its broad valleys and high plateaus, its lofty mountains and boundless plains, its inland seas and winding rivers, to be an ideal home for man.

Of all the countries of the earth none is so well fitted for the home of *one* people. Wherever our flag floats, it brings harmony and prosperity. On whatever distant isles it may be planted, there let it remain. No fear that the traditions of our fathers will be ruthlessly trampled under foot. The unity of our people and the unifying influence of the press will modify all conflicting interests. As our boundaries are extended, we shall change with changing influences; but each step brings us nearer to a common type.

DAVID W. HOYT, principal of English High School, Providence, R. I.— We are fortunate that we meet in such a city as Washington. It is in itself an educational influence to inspect the work of the Coast Survey, the Geological Survey, and the various other scientific organizations which have their headquarters in the nation's capital. Still better, it is an inspiration to meet and listen to the men who have given their lives to the advancement of science. As teachers we stand between original investigators and the public. We must explain their work to the rising generation before it can have its full effect upon the nation's life.

The subject assigned me for discussion has been so well and so fully treated that little remains to be said upon the main topic. The tendency of the times is to teach, not simply facts, but the reasons for those facts. Nowhere is the relation of cause and effect more plainly to be seen than in the influence of physical features upon the history of a country. Perhaps the best I can do, in the brief time allotted me, is to call attention to some ways in which the ideas presented can be practically applied in teaching the history of the United States.

It seems to me that topography and climate, in the last analysis, depend upon two conditions—latitude and altitude; hence it is important that the pupil should understand the effects of each. It is true that other influences appear, and have been well illustrated in the discussion this morning; but most, if not all, are the result of these two conditions.

Mountain chains and table-lands are directly the result of elevation. The rivers of the United States, so important in its historical development, their size, direction, swiftness of current, waterfalls, and navigability are determined by the divides which bound their drainage areas, and the difference of level between their sources and their mouths— all the result of difference of elevation, modified, of course, by the amount of precipitation. The rainfall itself, which may determine whether the land shall be desert or fertile, is largely the result of the presence or absence of mountain chains and table-lands which wring the moisture from the prevailing winds. Temperature, too, which modifies the fertility of the soil, directly results from latitude and altitude. The coast line of the United States—another most important feature—its gulfs, bays, harbors, all are the result of differences of elevation. A change of a few feet in the altitude of the continent would greatly modify or obliterate these features.

Consider the progress of the white man in settling this continent. His first colonies were necessarily on or near the coast. Next he proceeded along the rivers. The gulf of

Mexico, the Atlantic coast, the great lakes, the great rivers like the St. Lawrence and the Mississippi, mark his early explorations and settlements east of the Rocky mountains.

Take the settlement of New England as an illustration. From a few centers, like Plymouth, Salem, and Boston, the white men start many plantations along the coast. Then they gradually pass up the Merrimac, the Charles, the Connecticut, and other rivers, where they find easier transportation and more fertile lands than in other directions. Even western Massachusetts and Vermont were settled, in part at least, by a stream of migration which went from eastern Massachusetts southward along the coast, and then up the Connecticut river. Another stream from New York, along the Hudson and Champlain, entering Vermont from the west, explains the peculiar early history of this state. The Merrimac river fixed the site of the present capital of New Hampshire, while that river caused it to be considered, at first, a part of Massachusetts. The Indian tribes in their raids, whose object was to destroy the white settlements, traveled along the Connecticut river. They came from Canada across Vermont and New Hampshire, along the smaller streams and down the Merrimac, following the same lines as the white settlers. The influence of these natural features is necessarily still felt. Where are the white man's railroads, his waterfalls and mills? Along the same lines today, for the most part.

Outside of New England, the Hudson, the Mohawk, the St. Lawrence, and the great lakes are full of historic interest. Not only the settlement of the country, but the French and Indian and revolutionary wars, can be intelligently studied only by associating the events with the physical features of the regions concerned.

At a later date, after the main water courses had been followed up, another method must be employed in settling the country. After crossing the Appalachian chain, the white race set its face toward the West, driving the Indian before it. New England farmers and southern planters needed more fertile land. When the treeless and level lands were reached, the "prairie schooner" took the place of the canoe and the "dug-out." The settlers migrated to regions of approximately the same latitude and climate as they had left, and, therefore, yielding substantially the same agricultural products, but those on a scale as much larger as the prairies are larger than the New England fields.

Time does not permit us to speak of the influence of the arid region of the West, the gulf coast, the Pacific slope, and many other features which might be discussed.

MINOR MENTAL ABNORMALITIES IN CHILDREN AS OCCASIONED BY CERTAIN ERRONEOUS SCHOOL METHODS

BY DR. W. O. KROHN, PSYCHOLOGIST, EASTERN ILLINOIS HOSPITAL FOR THE INSANE, KANKAKEE, ILL.

My discussion of this subject is based upon four distinct premises or propositions, each of which is a clearly proven and fully demonstrated truth in some of the various particular sciences. It is not my purpose to endeavor to substantiate any particular theory of education. We are not trying to bring forth evidence in favor of any "fad" or "ism." It is an unwelcome fact, but a fact nevertheless, that mental abnormalities do exist in school children. To what is this seeming mental disintegration due ? We know that in a large measure these mental abnormalities are the direct result of erroneous school methods — the logical attainment of a pseudo-education.

The present paper is not at all concerned with the physical ills of the child, many and serious as they are, due to improperly appointed schoolrooms. "Schoolroom diseases" do exist, and the fact that they do exist is a stigma that we should all hasten to eradicate. That a healthy, laughing, romping child entering our modern school may be doing so at the probable expense of health is a sad commentary upon our modern educational methods. Can you wonder that a parent sometimes hesitates to give his child to the modern school, when he knows from observation that his dearly beloved child may come back to him at the end of a few years broken in health ? Must the parent of today take along with the modern school, possessing as it does so much that is excellent, utilizing as it does so many of the best educational facts and forces — must he needs take also those factors that make against, rather than for, the child's health ? Can you criticise the parent for sometimes halting at the schoolroom door and repeating to himself the question : "What will it profit my child if he gain the whole world of knowledge and lose his health ?"

But in these latter days reforms are being made in regard to seating, ventilation, lighting, and heating, as well as provisions for exercise, recesses, and recreations ; all of which goes to show the steadily growing belief of parents, teachers, and school officers in the dictum that "a ton of knowledge gained at the expense of a single ounce of health is far too dearly paid for." Our schoolhouses are being better built, better equipped, and better appointed, so that, as time advances, the physical child — his health — will be more and more conserved.

But the mental abnormalities of school children, resulting from erroneous, misfit methods, have occupied the thought and evoked the sympathy of comparatively few, and for that reason I shall devote the entire time of this paper to the discussion of these mental abnormalities, their causes, and how they may be eradicated.

My first premise I take from the domain of the science of biology, and it is the law of heredity, in which we believe to a greater or less degree. I mean the law of heredity only in its more restricted, but fully established, sense — namely, the acquired characteristics of the parent are not transmitted to the child. A strong belief in heredity has become so general and so widespread that the direct results of descent are looked for with supreme confidence. The good parent is supposed to have a good child, and the brilliant parent a brilliant child. Yet this is too sweeping, for goodness and brilliancy are qualities purely functional and not structural. They are the result of friction, struggle, social conditions, environment. The question of the underlying physical structure of the child is quite different. Bone, muscle, nerve, in their distribution, are governed largely by heredity. But there is a difference between natural inheritance of structure and artificial acquirements. The father may be deaf and the mother a deaf-mute, but the child of these parents will have normal hearing and speech. I have made personal observation of one family in which both parents were deaf, yet their five children are perfectly normal as to hearing and speech. A man may have his nose pushed to one side and the woman he marries may have suffered the same deformity, and yet the children born to them will have perfectly straight noses. Both father and mother may be "star" mathematicians —the result of acquisition and study—but the children born them may be unable to go beyond the "rule of three." Acquired characteristics are not transmitted. They are functional qualities rather than organic attributes. As Dr. Oppenheim says in his recent and most excellent book: "The doctrine of heredity, as commonly held, not only is falsely applied to human descents, but also renders the wisest and best efforts of training unnecessary and useless. For, if at birth the child's bodily and mental organization is complete, if the characteristics of parents are handed down to offspring, then there the matter ends. Every remarkable parent would have equally remarkable children, and every deficient person would curse his descendants with a like deficiency; work, training, striving after noble ideals would be useless and silly." All individual efforts at self-improvement would be worthless, every individual impulse would be incapable of realization, every endeavor of parent or teacher would be at an end. Not a single educational fact, not a single educational force, but would fail of fruition.

But education is not a matter of such utter hopelessness. Pedagogical efforts are not doomed to such complete barrenness of results. To such a hopeless philosophy this world would be a dull blank and man little more than a grinning skull. If one really observes the laws of growth and mental development, as they become actualized in every child, he will see that there is a more wholesome, roseate philosophy of education. Happily, then, the child does not grow according to some hard and fast rule that has been implanted in him before he was born. The old Calvinistic form of pedagogy, called heredity by Darwin, has been gradually giving place to the counter-dogma of liberal-minded men. For example, Rousseau says: "Everything is good as it comes from the hands of the Creator; everything degenerates in the hands of man." While both of these dogmas are too extreme—both the old Calvinistic and the more recent liberalistic—the sum of the whole matter is that entirely too much dependence has been placed upon heredity in its commonly accepted significance. Parents and teachers educate the minds, train the bodies, and develop the morals of the children under their care, "not so much by what their ancestors were, but what they themselves do and think." In the meantime, in any case of mental abnormality in the child, the teacher will shift the blame on the parent, and the parent in turn on the teacher, until finally, with their utter lack of co-operation, the psychopathically disposed child really becomes mentally disintegrated and quite degenerate.

In how far does the school help to develop mental and nervous abnormalities, when they could and should be checked and obliterated? In how far does the school give rise to new evils that affect the mental power of the child—evils that would be entirely unnecessary, were the courses of study, the daily programs and schoolroom methods more fitting and better adapted to the child? In light of the true conception of the doctrine of heredity we are warranted in saying that we have usually taken too much for granted in believing that the child at six years of age, as he knocks at our schoolroom door, is more developed than is really the case. We certainly take too much for granted with reference to the knowledge possessed by the children we are called upon to educate. There is, in fact, next to nothing of real educational value, the knowledge of which it is safe to assume at the beginning of school life. The child does not inherit in any form the knowledge acquired by his parents, and we must proceed in his education by bringing into exercise all methods of appeal to the child's mind. We must be prepared to educate the whole child, and not take for granted that a certain segment of the circle of his intellectual life has been measurably formed, fashioned, or developed by heredity. We must so place our array of educational forces that every form of the brain activity may be aroused, and that appeal be made to every mental potency. If we take for granted that a certain parcel of knowledge is bestowed upon a child as an heirloom, by his ancestors, we are creating a possibility for mental abnormalities to appear in the particular child thus partially neglected.

My second premise I take from the domain of genetic psychology. It is also a firmly established, clearly demonstrated principle—an ultimate fundamental truth—in the science that has given it its being. This principle is: Mental development in the child occurs by stages, by periods. Just as the entire body is not growing at any one time, so all the mental powers are not unfolding and growing at the same time. In bodily development growth settles for a while on one set of muscles, one set of organs, and then another, and another, until the entire body is developed. Likewise there is a nascent period for each mental faculty.

The first mental power to develop is sensation. At birth a child possesses but two senses—touch and temperature. They are the only windows of the soul open to receive the impressions that Mother Nature has to bestow upon him. A few hours after birth, vision is added, then hearing, and, after some days, taste and smell, followed by the muscle and other senses in turn.

The second epoch in the mind's process of unfolding is the memory stage. This is the period when the child is characterized by a prodigious power of remembering detail. A single hearing of rhyme or rule of song or catchy phrase is sufficient to insure its correct reproduction. We are all aware how much more difficult it is for us to commit rhymes or rules now than it was during our second or third year of school life.

The third epoch is the period of the growth of the imagination. Children love to live in a world of make-believe; they love to play circus, church, or school. How easy it is for the child to assume the rôle of Davy Crocket, Daniel Boone, Robinson Crusoe, or Buffalo Bill. During this period there is developed a mania which frequently occasions grave concern to parents. I refer to children's lies. Now, the lie of the child, it must be remembered, is by no means the same despicable moral offense as is the deceitful lie of the adult. It grows largely out of his desire to excite wonder. It is a bit of incipient research. He tries it, and, if it works, he tries it again; if not, he quits. But in these rovings of the imagination he is not attempting primarily to deceive.

The fourth period is characterized by the peculiar activity of the powers of judgment and comparison. This in turn is followed by the period of curiosity. No child whose curiosity is throttled and starved will ever become a good reasoner. He must first ask questions and reasons of others in order to be able to ask questions and reasons of himself.

I have thus outlined the periods of mental development for the purpose of showing that a well-organized course of study must be in harmony with these processes of development in order to be successful. More depends upon the order of studies assigned than upon the contents of the studies themselves. You have heard of the experiment made some years ago by four teachers in the city of Paris, in the Lycée (the school for boys), who asked permission of the minister of education that each of them might give to his twenty-five pupils the same studies prescribed in the required course, but in a different order, an order believed by them to accord with the natural development of a boy's mind, rather than in the arbitrary order demanded by cast-iron law. These boys completed all of the required studies in this natural order in three and one-half years, instead of seven years, the time assigned for the completion of the course as regularly given in the Lycée. Upon examination they were found to be equally proficient mentally, and above the average in physical development, as compared with those who had spent seven years in going over the same ground. As teachers we should have constant regard for the great principles of mental waste and mental economy. The course of study should fit the child; the child should not be jammed into an arbitrary curriculum, sustaining no relation to the natural order in which his powers of mind and body unfold.

In some of our schools seven or eight years are still devoted to the study of arithmetic; yet we know that all of arithmetic can be taught the child, and better taught, in the years between seven and one-half and ten. This is admirably done, to my personal knowledge, in at least 150 schools, saving much time and energy, and making room for important studies which would otherwise be crowded out. Now, we all know that the time to educate any mental capacity is the time at which that particular mental power is most rapidly growing. The time to educate memory is when memory is most rapidly developing; the time to educate the senses is when the senses are most alert, i. e., when they are rapidly unfolding. We should not have "diseased imaginations" in our school children, if we would only properly cultivate imagination when it is most rapidly growing. A host of mental abnormalities in school children can be traced directly to the fact that the course of study is not formed to correspond to the child's various periods of mental development.

If at any period of mental development the proper mental food — the proper school study — is not given, then the mental faculty that would otherwise grow so rapidly and unfold so perfectly (had it been properly fed and exercised) will be stunted in its growth and in all probability atrophy. The child's whole mental development will thus be impaired, and a whole life of mental abnormalities will present itself at a time too late for their complete eradication. Especially serious are the mental abnormalities which result from improper and insufficient training of the senses. All of the "raw material" of thought comes thru the senses. All of the raw material acted upon by memory, imagination, judgment, comparison, and reasoning is gained thru sense experiences. It can be said without fear of successful contradiction that, if the education of the senses be neglected, all subsequent education will partake of a vagueness, haziness, insufficiency, which will never admit of complete cure. From any sense error any other conceivable error may arise. And yet, how many methods of instruction there are so inopportune and inefficient that they really dwarf the senses! Train the senses of the child, and the rest of the mental development will almost take care of itself. The truly successful teacher is the sense teacher, for she is not merely trying to impart knowledge, but also to develop mental force. In cultivating the powers of sense of the pupil we accomplish four things for him, each one of which is vitally important:

1. We make his knowledge more accurate and clearly defined.
2. We make his knowledge more comprehensive and complete.
3. We develop his mental power.
4. We make his acquisition of knowledge pleasant and delightful, because the natural order is followed, "first the blade, then the ear, then the full corn in the ear."

My third premise I take from the domain of abnormal psychology. It is this: The process of mental disintegration attacks the higher, more complicate, and more recently developed faculties first, and the simplest and those earliest developed are the last to be affected. This premise requires but brief discussion, for its application is at once seen. It teaches us that, when mental disintegration once sets in, it is the finest mental faculties that first fall prey. How serious, then, are these minor abnormalities from the very beginning! They may not be observed and ascertained until terrible havoc has been wrought. Reason, both deductive and inductive, may have crumbled and fallen into decay, and imagination, memory, and the powers of sense be as perfect as aforetime. It is necessary to be constantly on the alert for even the minor mental abnormalities in children, so that mental disintegration of the highest mental faculties may not proceed too far before remedial measures are sought and applied. If the closest observation is not maintained in reference to pupils in whom minor mental abnormalities are even merely suspected, the loss may become irreparable.

Inasmuch as fatigue is the most common source of danger in this connection, close watch should be made for fatigue signs. Overstrain at school, by producing fatigue, may be the occasion of destruction and disintegration of bodily tissue, and also cause serious and permanent mental defect. The best period of the entire day, both with respect to mental quickness and mental vigor, is between the hours of 8 and 10:15 o'clock in the morning; the worst is between 11 and 12 o'clock. The period between 1 and 2:30 o'clock in the afternoon is the third best, while that between 3 and 4 o'clock is the second best. The heaviest school work should be assigned to the hours when the child's mind acts most vigorously and with the greatest quickness, and the lightest work should be so arranged as to come at the period of greatest mental depletion.

The teacher and parent should be especially observant with reference to "abnormal nerve signs," as occasioned by fatigue, misfit methods, and inopportune studies. The more common abnormal nerve signs that presage danger are disturbance of balanee, twitching of hands and face, eye movements, postures of the head and hands, irritability, inattention, excitability. If the child slouches and shows no exact symmetry of balance; if the voice is of poor tone; if he cannot fix his eyes well, but looks about by moving the eyes and not the head; if there is a bagginess of the underlids of the eyes; if he be inattentive and devoid of interest in the usual school occupations; if his response in action be slow and uncertain, one may be assured that such a child is fatigued to the point of danger.

Again, since we know the order in which the mental faculties disintegrate—and we do—we may know how far the mental disintegration has proceeded. If reasoning only be affected, the child is not suffering as much from mental abnormality as if the memory, judgment, or imagination be diseased. His *mal* is not so deep-seated as it would be in the latter case. This is a point of much value, for if we know just how far the processes of mental disintegration have proceeded, we know best what occupations and methods we are to employ in order to counteract the disease.

My fourth and last premise is taken from the province of physiological psychology. It is the principle of localization of brain function. By this we mean that not all parts of the brain surface respond to the same stimuli and give birth to the same kind of sensations. Neither are all parts of the brain cortex concerned in sending forth motor impulses of the same group or class. We know, for example, that any excitation of the nervous elements in the back part of the head give rise to visual sensations. It makes little difference whether they come thru the eye or not—a slight mechanical jar at the back of the head is sufficient to cause one to see "stars." The brain center concerned in moving the finger is entirely distinct and separate from the one concerned in moving the arm. The outer gray rind or cortex of the brain is, therefore, a very complex organ, or, rather, it is more like a very complicated keyboard, the responses coming in from those parts of the body that are in direct relation to certain specific forms of sensation. As Professor Hering, of Austria, says: "The different parts of the brain hemispheres are like a great tool-box, with a countless variety of tools. Each single element of the cerebrum is a particular tool. Consciousness may be likened to an artisan whose tools gradually become so numerous, so various, so specialized that he has for every minutest detail of his work a tool that is especially adapted to perform just that precise kind of work very easily and accurately. If he loses one of his tools, he still possesses a thousand tools with which to do the same work, tho under disadvantages both with reference to adaptability and the time involved. Should he happen to lose the use of these thousand also, he might retain hundreds with which to do the work still, but under greatly increased difficulty. He must needs have lost a very large number of his tools, if certain actions become absolutely impossible, but the loss of a single tool is in every case just that much of a disadvantage." This quotation translated from Hering states very clearly the exact physical basis of education. If the child is to have full use of all the nerve cells of his brain cortex, they must be developed—educated—by use, by activity. If they are not brought into action by occupation, sense experiences, mental employ, they atrophy.

Now, at birth the child possesses all the brain cells it will ever have. Brain cells do not proliferate after birth. If they are not exercised, they entirely drop out of existence—they die. The problem before us is to educate the entire brain of the child; it is given him for that purpose. We can give him this complete education only when we approach him thru every one of his avenues of sense and educate him into a wide range of motor activity. Life is growth. A brain cell that does not grow is dead. A brain cell cannot grow save thru exercise and use. All the brain cells can be made to grow only when the school and home environment of the child is such as to appeal in every possible way and with sufficient energy to arouse the child's many-sided activity. If a certain group of nerve cells is uneducated, is allowed to die, then the child becomes mentally and nervously abnormal in just so far. Brain disorderliness is due more to one-sidedness of methods of education than to any other possible cause.

Before closing I wish to make reference to certain specific cases. H—— is a boy of fair complexion, ranks twenty-fourth in his class, and is continually losing his hold on school work. The signs of nervous exhaustion were: over-mobility—he was decidedly fidgety; fullness under each eye, indicating that he was a sufferer from headaches. These were the most noticeable, tho other "nerve signs" were present. It would be a mistake to leave a weak boy like that to do nothing all day, merely waiting for him to grow stronger. Such children are especially in need of education and training—*but suited to their condition and capacity.* "A detailed study of abnormal nerve signs in the child will give assistance of practical value to those in charge of nervous and delicate children. They will reveal certain points to be aimed at in physical training. A knowledge of the brain disorderliness indicated by the signs will give plain hints as to the form of mental disorderliness likely to be met with in the pupil."[1] For instance: wandering eye movements lead to inaccuracy in copying work and in arithmetic. Children with twitching finger movements have spontaneous thoughts arising that lead to mental confusion and inaccurate answers to questions; also interfere seriously with memory. The child slow in all movements and slouching is apt to be dull in mental action, until his posture, attitude, and response are improved upon. "Want of facial expression, grinning, frowning, protrusion of the tongue, ill-balanced hand postures, want of motor control are all cardinal signs of brain disorderliness." The parent and teacher must patiently labor to remove such abnormal nerve signs and the brain disorderliness corresponding. Closely observing the circumstances under which each of the given signs most frequently subsides, one is enabled to carry on the best form of brain training. Nature study, in that it naturally calls all the child's mental powers into activity, is of much more value as a corrective and educative force than books alone. How "The Barefoot Boy" of Whittier is to be envied in this regard.

> Oh for boyhood's time of June,
> Crowding years in one brief moon,
> When all things I heard or saw
> Me, their master, waited for.

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[1] Francis Warner.

I was rich in flowers and trees,
Humming-birds and honey-bees;
For my sport the squirrel played,
Plied the snouted mole his spade;
For my taste the blackberry cone
Purpled over hedge and stone;
Laughed the brook for my delight
Through the day and through the night,
Whispering at the garden wall,
Talked with me from fall to fall;
Mine the sand-rimmed pickerel pond,
Mine the walnut slopes beyond,
Mine, on bending orchard trees,
Apples of Hesperides!
Still as my horizon grew,
Larger grew my riches too;
All the world I saw or knew
Seemed a complex Chinese toy,
Fashioned for a barefoot boy!

By nature study, in the best sense, however, is not meant teaching science, but scientific teaching.

I cannot refrain from calling attention to the very considerable danger arising from home study, especially in young children. In the so-called "study" at home the child becomes accustomed to certain irregularities of work that should never be cultivated. We should find out how much the child can do in a school day; let the child do such work at school, and let it feel that it leaves the school as the business man would his desk, with the business of the day done and the satisfaction of well-deserved rest. Moreover, as Dr. Meyer has pointed out, "work at home creates that martyr spirit with which the abnormally conscientious pupils pride themselves on having so much work to do and on having to avoid company and society; these children are craving for admiring sympathy, and do this later in life to the disadvantage of those who live up to more rational and sanitary rules."

Further, I must say that I have never seen a case of brain disorderliness that was not benefited by physical training. Evidence is available on this point from the comparison of a large number of pupils of schools with and without physical training. Physical training of the right sort, properly adapted to the child, tends to improve his brain condition, either preventing or removing disorderliness in motor and in mental action, and promotes healthy activity in both connections. This is absolutely true of children well made in body, as well also of those in some slight degree below normal. A case in point. You may have in your school a child whose mental processes are slow and limited, tho fairly accurate. You ask him a question. His answer is slow in coming. You can best quicken the mental processes of such a child by quickening the interaction of his eye, ear, and hand by games of competition, such as baseball or tennis, where the action must be quick or failure result.

I have thus briefly considered some of the causes of nervous and mental abnormalities, how they could and should be checked. The school is not alone guilty, but only accessory. It is, indeed, distressing to the patriot and humanitarian to perceive how the mass of nervous evils, and at the same time mental and moral weaknesses and sins, increase among the people, and how many are followed by these abnormalities from the cradle to the grave.

DISCUSSION

THE LATEST PRACTICAL DISCOVERIES IN BIOLOGICAL SCIENCE AND THEIR BEARING ON EDUCATION

BY N. A. HARVEY, PROFESSOR OF NATURAL SCIENCE, STATE NORMAL SCHOOL, WEST SUPERIOR, WIS.

All educational theories must conform to psychological laws. To claim psychology as a department of biology would have seemed preposterous a few years ago. With the old pyschology, dealing as it did with the mind, without reference to the brain, biology has nothing to do. But modern psychology, dealing particularly with the brain as the essential physical organ of the mind, is properly drawn into the domain of biological science.

I think it is easy to claim for biology too high a place in pedagogical science. We must remember that biology is very young yet — scarcely forty years old in its modern form; and its application to psychological principles is very much more recent. As it appears to me, the function of biology has been so far the verification of pedagogical principles rather than the formulation of new theories. It has shown itself capable of sifting the doctrines of pedagogics separating the good from the bad. In this field it reigns supreme. A pedagogical doctrine, when brought to the bar of scientific investigation, stands or falls, and from this decision there is no appeal.

But biology has not revolutionized the doctrines of pedagogics. Much that is good in education was wrought out and thought out before biological science in its modern form began to be. Localization of brain function is one of the discoveries of biology whose truth has passed beyond the stage of discussion. By dissection, by experiment on living animals, and from pathology evidence has been accumulated that particular parts of the human brain are in some way associated with correlative mental activities. Important conclusions inevitably follow. Since each part of the brain has its own function, it is evident that all functions must be exercised, if the whole brain is to grow and the man reach the limit of his possible stature. The advocates of general education are, therefore, justified by the tenets of biological science.

In brain no memory center is found. There is no such thing as *the* memory in the sense in which it was formerly understood and upon which all our old psychologists so fondly dilated. Memorizing words for the sake of training the memory is no longer admissible, and the futility of great feats of remembering is now generally recognized. Biological science, by its investigations upon the centers of sense perception, emphasizes the importance of the senses in education; not, indeed, for "training the senses," but for furnishing to the mind the only material it can utilize in its growth. The atrophied centers of vision in the blind, the abnormalities existing in the brains of persons having other senses defective, show, with a clearness never before exhibited, how absolute is the dependence of the mind upon the senses. Hence follows inevitably the emphasis imposed upon scientific subjects, and especially laboratory work. But I would have it understood that those who see in scientific subjects only the facts to be learned, and not the mind to be trained, are a snare to the unwary and are bunglers in the work, discrediting science and charming its votaries.

So, too, from the dependence of the mind upon the external activities of the body—which is not a discovery of biology, but a verification of previous conclusions—the advocates of manual training are furnished with an irresistible weapon of offense and defense, which they abandon only when they differentiate the work of the sexes, thereby leaving the educational ground and adopting that of utility. Biological science establishes, in a way never before attempted, the absolute dependence of mental activity upon bodily and physical conditions. Periodicity of physical growth, evident from the first in vegetable organisms, but found equally true of all animal structures, explains the varying aptitude of children for mental work. Mental activity and physical growth have an inverse relation to each other. Now we have an explanation for facts of obtrusive generality of which the old psychology and previous pedagogical theories took no account. The several climaxes of bodily growth, the various periods of brain development, are each characterized by remarkable mental phenomena, each demanding its own treatment, and formerly neglected entirely.

Having said so much concerning the conclusions drawn from the work of those most ingenious and accurate investigators who, with tireless energy, have contributed to our knowledge of the nervous system of man, I trust it will not be considered derogatory to them, if I point out, in a spirit of fairness, some limitations necessarily attending upon their work. In the first place, biologists from purely biological studies have never yet demonstrated the effect of education upon the organs of mental activity. No difference has been discovered between an educated and an uneducated human brain. So far as any conclusions can be suggested from their work in this direction, nature has much more effect than education upon the development of the brain. As a teacher of children I am unable to concur with the low estimate of education which, at present, from purely biological demonstrations, we are compelled to put upon it. One of the most conservative of biological writers upon this subject has recently said: "Connections between the exercises of formal education and brain change have not been demonstrated. It is not known how a year's schooling affects the central system, and it is not probable that we shall soon arrive at facts of this sort." Such being the case, it seems to me unwise to attempt to base our educational theories upon purely biological evidence. It would be unwise to take biology as the basis from which to work. This is nothing discreditable to biologists, but merely a recognition of existing conditions. Biology is very young yet. It has all the future before it, and some time the limitations that now exist may be removed.

L. C. **Greenlee**, superintendent of schools, District No. 2, Denver, Colo. (discussing Dr. Krohn's paper).—We as teachers are especially fortunate. If a pupil does well in his studies, we receive all the credit. If he does poorly, he gets the blame. There are those who do, and are able to do, much more—three times as much as others. We expect it of them; the pupils know that we expect it of them. This is as it should be, because they are able to do it. If a pupil does only one-third as much as he is able to do, it will lead to mental disintegration. In laying out the work for the pupils, we must take into consideration their mental ability, their power of application, and their physical strength.

Not every child has inherited a sound physical organization, and our courses of study should be arranged for the weak as well as the strong. In every school, especially in our city schools, every provision should be made for plenty of physical exercise. This problem will take care of itself in the rural schools, for the children who attend these have plenty to do before and after school hours.

While proper food and correct dietetic habits are of the greatest importance to the welfare and happiness of mankind, the quality of the air which we take into our lungs is, if possible, of greater importance. Man can live on one meal a day and enjoy good health; he can limit himself to the simplest and plainest kind of food and work hard all his life, and live his three-score years and ten; but let the supply of oxygen be cut off, and see what happens in a very short time.

I believe in the old-fashioned outdoor recess. Plenty of pure air and properly regulated outdoor exercise are necessary to give nerve force; to stimulate the respiration and the circulation of the blood; to develop the muscles; to throw off or destroy the poisons constantly accumulating in the blood; to strengthen and calm the mind, and to produce the best moral development in persons at any age.

The toxins which have been accumulating in the blood poison, weaken, and tire the brain, and, as a consequence, mental results are unsatisfactory, because impressions made on a tired brain do not last, and a moral nature is depraved, because pure and generous thoughts cannot long exist in a foul body.

Most brain workers are fond of physical exercise; fond of hunting and fishing. Not so much for the game they bag as for the health they seek.

If the children of this land are to have sound bodies and sound minds, they must work. Our pupils are capable of doing much more than we think, and some of our teaching is the merest kind of nonsense. A little girl, six years old, came home from school with a pumpkin seed in her hand and informed her mother that the teacher had given them a lesson on the pumpkin, and that they had been taught that the seed is white, but the pumpkin is yellow. The mother asked: "What color are the vines?" The six-year-old replied that the teacher had not taught her that. "But you know, don't you? You have seen them growing in the garden." "Of course I have, but we are not expected to know anything until we have been taught."

If any one thing will lead to mental disintegration, it is that of giving the child something to do that requires no effort on his part. It seems to me that it is worse than giving him that which is beyond his ability and his comprehension. This, we all know, is bad enough.

When it comes to a discussion of methods, I am reminded of a little incident that came to Sidney Smith. He and his friend were walking thru one of the narrow streets of Edinburgh, where the houses seem to lean toward each other. Two women were bickering and quarreling from opposite windows, filling the streets with their clamor and noise, and attracting the attention of the passers-by, when his friend said: "Why don't those two women agree?" Sidney Smith replied: "Because they argue from different premises." We shall never agree on methods, because we argue from different premises. Any wrong method will lead to mental disintegration. Who is the authority that would dare to say that his method of developing the child is the correct one, and that all others are wrong?

To argue that there is but one way is to argue against all private study and self-help. It is to argue against originality of any kind whatsoever on the part of the teacher.

That which best develops the mind is the most practical. The mind grows in its own way. The teacher's task is not to devise, but to discover, this way. All ends produced by human agency are produced by the use of some means. Success in attaining ends depends upon two things — upon the use of the right means and upon using them in the right way. Those who have no definite methods to use have no definite ends to attain. All teaching worthy the name has its own ends to accomplish.

An effort to cram defeats its own ends. "Hurry retards." Crowding the memory with words weakens it for thought. Filling the mind with the forms of language that convey no thought is like filling the stomach with husks. No digestion follows. More than this, the mind overburdened with this crude material loses all power and inclination for real work.

It is possible for a teacher to become so thoroly saturated with school doctrines, so loyal to school practice, and to stand so much in reverence of the "big guns," that simple, plain, and sensible ways of meeting school problems may be ignored.

Common-sense views of teaching and managing should never be thrust aside for the figments of mere professional suggestion. Good sense is always of commanding value in any sphere or in any calling, and it is nowhere more needed or more efficient than in the business of teaching.

If we are looking for and expecting to find the method, the only method, we are face to face with an insoluble problem. It is not so much wrong methods as the misuse of methods that we must guard against. Every child must meet and master the difficulties of learning for himself, and a right method is that which stimulates children to encounter and master difficulties. To implant vigorous aims and incentives in children is the work of the teacher.

R. K. BUEHRLE, of Lancaster, Pa., offered the following resolution, which was carried:

Resolved, That the attention of the Commissioner of Education be directed to the paper of Dr. Krohn, and that he be requested to publish and circulate the same as a circular of information for the people.

H. E. KRATZ, Sioux City, Ia.—I have understood from the paper of the morning that the definite statement was made that there was no seat of memory, and was interested in the references that had been made to attempts to improve memory. I want to ask this question: Does this fact change the work of the average teacher in the schoolroom, and, if so, in what way?

DR. KROHN.—The statement quoted was made by Mr. Harvey, and I thoroly agree with him. We have a distinct seat for every organ, such as the eye and ear, etc., but there is none for the memory. We must educate the memory thru the only channel in which we can approach it, viz., thru some of the organs. The old idea that memory was a great storehouse, into which were placed facts in abundance, has been disproved. Memory is not a general function. Rote learning and merely memory exercises for the purpose of training the memory have no educational value. Memory enters into every exercise of the child, but not as a distinct fact. It does not increase his mental efficiency. Our methods of education must be modified to suit this changed condition.

MR. HARVEY.—I made the statement quoted rather boldly. I have thought it over thoroly. I wanted it to stick, and am of the opinion that it will. Mental processes are accompanied by certain actions of the brain. Memory is the repeating of changes that have once occurred in the brain. When it is possible to repeat any series of changes in the brain, then we can remember. Any part of the brain takes part in the process of memory. That was the sense in which I used the statement. Memory is not a distinct organ.

A. R. TAYLOR, State Normal School, Emporia, Kan.—I should like to ask a question: What do you mean by memory?

MR. HARVEY.—To answer that question directly would involve a statement not intended. When we remember a thing, the same series of changes of brain occur as did the first time. The changes do not cause us to remember, and the memory does not bring about the changes. They are reciprocal.

MR. KRATZ.—I am still in doubt with regard to the second part of my question. If we accept the statement made, does it affect the practice in the schoolroom? Can we continue teaching in the same way as we did when accepting the old theory?

MR. HARVEY.—In answering that question as to whether we must change our methods of pure memory training, I should say, yes. But in so far as the memory is used in acquiring tools for future work, no. I still have a great respect for the multiplication table, and I believe there are certain things which we must acquire in the same old way, simply for their future value.

CHARLES C. RAMSAY, Fall River, Mass.—The function of the man of science is to discover new truth. This adds great responsibility to the teacher. There are many difficulties in the way. The demand is largely made for more individualized instruction. This cannot be granted except as the people are convinced of the value of the demand. We need a large supply of the best-qualified teachers, buildings of the most improved pattern and supplied with all the necessary appliances. If the men of science are to help us secure these things, they must speak with greater accuracy than they do today. The desirability of giving the study to the pupil at exactly the right time is acknowledged, but the difficulty of making a course of study is correspondingly great. We must take teachers and pupils when we can get them. The men of science, while showing us these defects, do not give definite remedies, and I infer that we are expected to work out our own devices. I am not in sympathy with the statement that, in secondary schools and in the upper grades of the elementary schools, home study is an evil. From the standpoint of the practical teacher I affirm that it is worry and not work that kills. The complexity of our modern social life, the economic and industrial conditions of our people, have more to do with the abnormalities indicated than have legitimate school labor, and the home tasks which may be imposed upon the pupil by the teacher.

DR. KROHN.—I submit that the work done at home is done in a very irregular way. We have been told that it is worry and not work that kills. I ask, what can worry a child more than the thought, on going home, that he has certain lessons to get for the morning? He cannot go home with the same freedom of mind as does the merchant. The child must necessarily worry when there is held up before him certain penalties if he does not bring in the work on the following morning properly prepared. The children become martyrs to their condition. What we need in this world is strong men. The teachers place tasks upon the students that are too great. Each specialist thinks his is the most important work, and the result is that such an amount of work is accumulated that worry is the inevitable result. The children become broken in health because they are imposed upon. We should develop them into the best type of citizenship. We cannot do this, unless we have a sound physical basis upon which to build.

MR. RAMSAY.—The rational method of education has the tendency to make the acquirement of knowledge pleasurable. The remedy for overcrowding our curriculum is in the elective system, which has been adopted in most of the New England states. The trouble is from without and not from within, and the responsibility for certain evils should not be laid upon the teachers, but rather upon society, where it belongs.

JAMES H. VAN SICKLE, superintendent of North Side schools, Denver, Colo.— I should like to ask of Mr. Ramsay if the elective system which he refers to as having been adopted in New England has been included in any of the schools below the high school.

MR. RAMSAY.—Perhaps the statement is slightly misleading, but I would answer yes, that in some of the schools we have the optional system in the seventh, eighth, and ninth grades. We have nine grades in the elementary schools.

MR. LEIBIG, of Kutztown, Pa.— I am greatly disappointed in the fact that the paper which was to have been presented by Dr. Coulter has not been given. We have not heard concerning some of the recent discoveries of late years. We had hoped to hear something definite. It is certain that some well-known discoveries have been made. There is a certain relation or co-ordination between the mind and the body. In this light our knowledge of the outside world comes to us thru the organs of the sense, and as it is our duty to reach children thru these organs, it becomes our duty to know all we can concerning these things. Of the school physiologies that are now on the market I hardly know a single one that is correct in its statement of the architecture of the nervous system. Instead of the old idea that the brain cells were connected, we now know that they are single units. I plead for a closer and better and more up-to-date study of biology.

G. W. FITZ, Harvard University, Cambridge, Mass.— I protest against some of the statements of this morning's discussion. It is high time that each teacher should stop and ask himself the question, What is best for me to do in order that I may carry on my work successfully ? What influence should my study have on my teaching ? We are told that memory work should not enter so largely in the training of a child. What is the legitimate outcome of that statement ? Is it not that some of our work in arithmetic must be laid aside ? Is it not a suggestion that the most of education must come from observation ? Does it not mean that nature study shall take the place of the arithmetic displaced ? That will give him material for observation. The child should secure the power to reason in all possible ways. Motor activity is necessary for the child. In some of our schools we expect the child to keep still for about five hours a day. One teacher was complaining that the children coming to her from kindergartens gave her the most trouble, because they were getting up and asking all sorts of curious questions. But, said she, that only lasted about a month. After that they were docile enough. We are too apt to ignore the fact that physical activity means more to the child than anything else. Childhood is the only time when humanity has the freedom from professional lines and has the opportunity to devote itself along the lines of physical activity. The amount that a child can repeat is not a criterion as to the amount of knowledge which he possesses. We are apt to require too much. If he does not read and cipher with a certain amount of ability, we complain that he is not progressing as rapidly as he should. The child should be given the work which he will enjoy.

DR. CHANEY, Cortland, N. Y.—The discussion of the morning confirms the idea that it is not easy for schoolmen to agree upon a question. We recognize the conditions as they exist, but do not agree as to their cause and remedy. This has been an inspiring and helpful discussion, and we can take home with us much that will help us. The great danger in this country is that of putting too much work upon the child. One cause for this is that those in charge of our higher institutions of learning are responsible for this talk which we hear of enriching the forces of the grammar and high schools. The university throws back upon the high school work which it formerly did. The high school, in turn, delegates to the grammar school some of its previous work. The grammar school, to make room for that, is obliged to force something back upon the primary teacher. The primary teacher has no place to retreat, and the result is that our elementary curriculums are crowded. The remedy for this condition of affairs is for those who have led the way in the past, viz., the higher institutions of learning, to do so again. But it will not be done until it is thoroly understood that the lower schools are in danger. Then there is the reaction upon the teacher himself, which we are apt to overlook. The child worries over his work and comes back to school with it half done. The teacher feels the impress of the student's condition, and his patience becomes exhausted. His sympathy is lost, and, as a result, a great harm is done to school life. We ought not to put so much upon the primary teachers in this country.

DR. FITZ.—The charge just made with reference to the crowding of the work into the lower schools is hardly just. While the universities have attempted to enrich the lower schools, and have claimed that the work should be begun earlier, they have made their efforts to enrich by taking away some of the work in the elementary and secondary schools and putting in its place that which will enforce the child's power of observation. The important point is not to crowd, but to give that which will uplift. Not to teach him to memorize, but rather to see, to feel, to hear. The child should be made to study the organs rather than the science.

MR. RAMSAY.— I wish to defend the Harvard movement in so far as it has been misunderstood. The standard of admission to the university was as high before that

movement began as it has been since. The aim has been to give a variety of electives rather than to increase the amount of the work. The motive has been to make democratic education for a democratic people. It has been to offer those studies which will be of interest to the child. They have had in mind at all times the improvement of the elementary schools.

Dr. Krohn.— Coming back to the subject from which we have wandered, I offer the suggestion, in the first place, that we can by observation make the child's mind more of an open page than we have; and, knowing the child better, we can educate him better. All children grow in the same order, tho not at the same rate. This being a fact, we can so employ the student that each special power will be educated at the proper time. Our aim should be, not to make the child fit the course of study, but rather the course of study fit the child.

THE CULTURE VALUE OF HIGHER MATHEMATICS

BY DR. W. B. SMITH, PROFESSOR OF MATHEMATICS, TULANE UNIVERSITY

> *οἰδ' ὁτι θνατος ἐγω και ἐφαμερος· ἀλλ' ὁταν ἀστρων*
> *μαστευω πυκινας ἀμφιδρομους ἑλικας,*
> *οὐκετ' ἐπιψαυω γαιης ποσιν, ἀλλα παρ' ἀυτῳ*
> *Ζηνι θεοτρεφεος πιμπλαμαι ἀμβροσιης.*
>
> —*Ptolemy.*

The terms of the subject in hand absolve one from any attempt to answer the query, What is the final worth of higher mathematics? Adequate treatment of this question would land us at once in the general doctrine of values of the ultimately good, and we should have to range ourselves in the camp either of Hedonists or of Energists, if indeed there be no middle ground. Even then the case would not be desperate. Even if pleasure be the one self-vindicating fact of the world, it would still be possible to justify the highest mathematical discipline, pure and applied, as a pleasure-bringing agency of great significance; still more, if the be-all and end-all of life lie not in pleasure, but in activity, in self-realization, in the fulfillment of the idea, whether of individual or of species, whereupon pleasure follows (says Aristotle) as a secondary, unintended effect, it would seem easy to make good the loftiest claims for mathematics as an especially high type, if not the very highest type, of human mental activities, a form of spirit-energy, in fact, which not only differences man from lower animals, but marks off the higher from the lower races of men — nay more, which marks off the very highest even from the very high. For it is noteworthy that, while the nobler varieties of men, the Caucasian, have nearly all distinguished themselves in several modes or elements of civilization, as art, law, social institutions, literature, religion, philosophy, conquest, discovery, commerce, or others; and while even the inferior Mongolian has achieved many notable things in some of these; yet mathematical success has been reserved for only three especial bloods, the triple crown of humanity, the Hindus, the Greeks, the Teutons. The indication, then, is unequivocal that mathematical activity belongs, and even peculiarly belongs, to the very highest form of energy of which human nature is capable; so that, if there be any truth in energism; if the goal of history, at least our history, be the perfect and complete flowering of humanity; if the ***summum bonum*** both for the individual and the nation and the race be the full-rounded development, the harmonious unfolding, of the utmost possibilities of our nature; then the place of mathematics in the topmost order is indisputably assured.

However, the subject for discussion imposes a more modest task. It does not inquire: What, if any, final value have education and culture, mathematical or other? — a question, indeed, that may be rationally put; on the contrary, it assumes that education and culture have uncontested worth, and it asks: Of what value to them is higher mathesis? Herewith at once the further query arises: Of value to whose culture? to that of the student himself? or of others that perchance learn from him? or to the whole body of our culture in general? The answer would seem to be yes, to each particular; we must take culture in the widest sense, as regards both its nature and its application.

And first I would remark, resuming the thought this moment dropped, that even if it were impossible to make clear what is the culture value of higher mathematics, we might still be unshakably sure that such a value really exists, and in the largest measure. For it is certain that the impulse to pure mathematical speculation has always shown itself especially strong among the great civilization-makers of the earth, and always at, or immediately after, the crisis of fullest bloom of the culture spirit, and never, unless sporadically, among any other people or at any other epoch. Who would think of looking for high mathematical achievement among an inferior people, or a decadent race, or in an era of languishing intellectual life? Consider the Arabs, not an inferior, yet not the most superior, race. How distinctly their abilities and their limitations are indicated in their attitude toward Greek and Hindu mathematics! — both what they could, and what they could not do. At the moment of perfect efflorescence of the national mind they seized upon this discipline with the greatest avidity, but they were never quite able to bend the bow of the mightier Aryan spirit. Cast your eyes over the world of today. Where and only where are the triumphs of analysis celebrated? At the foci of civilization, in the fever-heat of the elect blood of the planet, where the impulse of the spirit toward creative activity drives it with œstrual ardor along the path of discovery. Despite our own immense advances in wealth and all the material elements of civilization, for two generations we lagged behind in nearly every intellectual regard, and it was to the men of Europe decisive proof of the arrest of our higher spiritual life, the fact which they urged: "You produce no great mathematicians." On the other hand, it is everywhere accepted as a sure sign of a re-birth of the spirit in America, as the promise and potency of the highest achievements in the realms of mind, that within the last score of years the keenest mathematical interest has been aroused among us, that mathematical instruction has been improved and extended almost incredibly, and that original work of excellent quality is prosecuted from Maine to California.

Passing now hurriedly from nations to individuals, we observe that creative mathematical power almost always implies general intellectual abilities of the first rank. Teachers in colleges and universities will testify that, while many students notably deficient in mathematics may show remarkable and even extraordinary ability in some other studies, yet students notably excellent in higher mathematics are seldom deficient in any other subject; mathematical ability is not necessarily implied in any other purely intellectual ability, but it nearly always implies these others, at least in respectable degree. Quite in accord with this fact is another, that great mathematicians have been almost uniformly men of transcendent power in other directions. Time fails me save to mention the names of Descartes, Pascal, Fermat, Leibnitz, Newton, Wallis, Euler, Laplace, Bolzano, Gauss, Hamilton, Boole, Cayley, Sylvester, Clifford, Tait, Thompson, Maxwell, Helmholtz; and there is a host of others. There is no prejudice absurder than the popular one that the great geometer or analyst is a man of straitened intellect, versed in subtleties and keen-sensed for figures, but devoid of imagination and dead to the stirrings of the larger life of the soul. This charge may hold of the circle-squarer, the angle-trisector, the lightning-calculator, but not for an instant of the genuinely great master of numbers. When the first of living mathematicians, Sophus Lie, was asked to name the characteristics of the mathematician, he replied in four words: *Phantasie*, *Energie*, *Selbstvertrauen*, *Selbstkritik*. We can hardly accept this enumeration as complete, but it is at least so far forth authoritative as it assigns imagination as the supreme quality of the mathematical mind. History teems with examples that illustrate this truth. Euler declared his addition-theorem of elliptic integrals was obtained, not by straightforward reasoning, but rather by experiment or divination (*potius tentando vel divinando*); the like may be said of most discoveries, and the creator of *Alice in Wonderland* has taught us how well mathematical pursuits may consist with the lightest play of the airiest fancy. The fact is that great mathematical powers conquer all domains of thought with almost equal ease, and reign "o'er all the realms of knowledge absolute." Thus Grassmann, when his wonderful but premature creations failed to catch the eye of Europe, at the age of nearly fifty, laid aside his *Ausdehnungslehre* and closed his life brilliantly in classical and comparative philology. We may say, then, confidently of the greatest geometers and analysts that they would have been almost equally great in any other field of pure intellectual effort; they were fascinated by mathesis, even as a chess-player is fascinated by a problem of extreme difficulty, but perfect definition; and if they have sometimes lost themselves in too exclusive devotion to their mistress, it was not that they were incapable of other affections, but because her charms were fadeless, incomparable, and infinitely varied.

What, now, is the logical bearing of this array of facts hinted rather than cited? If higher mathematics be a flower, not of the human spirit in general, but only of the choicest national spirit — nay more, of the very elect of the elect; if it is a fruit of the highest culture among the highest cultured of the culture-races, its significance as a culture product is beyond question. Even if we could not perceive its culture value, its worth as an index of culture would be indisputable. For where it flourishes, there we may be sure the highest intellectuality is attained; and where it does not flourish, there the highest intellectuality, tho it may be potentially, is not yet actually, present. Even so much would fully justify the cultivation of mathematics. This is not all, however. It cannot be that higher mathesis is a mere concomitant of culture, the barren daughter of a fruitful mother. For, abstracting at present from the applications of higher mathematics and their inestimable contributions to the comfort and dignity of our life, and fastening our eyes solely upon the reaction of mathematical study upon the individual and the general mind, regarding higher analysis and geometry as merely a Titanic sport of the intellect, we cannot but believe them especially adapted to train, conserve, and develop the powers that find in them their delight. This holds especially of pure mathematics, because it is especially a free and natural activity of the intellect. No outer consideration of any kind spurs on to such study; it is not work, it is essentially play. The mind does it, because the mind wants to do it. The same cannot be said so truly of applied mathematics. There some object is to be attained beyond the mere mathematical result; the mind works not perfectly freely, but under a certain foreign stimulus; it toils at a task not self-imposed. Now, this task may be extremely important, but we cannot be sure that the labor it demands is the normal, and therefore the best, gymnastic for the mind itself. It may be exceedingly important for a child to pick cotton, or follow the plough, or even work in the factory; but we cannot believe such enforced exercise the best for its physical growth, which, indeed, is often checked thereby and misdirected. On the other hand, no one doubts that the natural spontaneous activities of the child or of any other organism must be pre-eminently suited to the perfect development of the organism itself. Herein lies the eternal superiority, as culture agencies, of liberal or speculative as over against practical studies. The former are essentially free, made by freemen and for freemen; they are the noble play of the spirit, its self-expression, its delight, its supremely worthy, intrinsically just and proper goal. The latter are essentially servile, made for servants and by servants; they are inherently work, often, in fact generally, extremely useful and even indispensable work, but nevertheless work, and hence, at the very best, a means only and not an end, forever wanting in the dignity and grandeur of a goal. The free speculative activities are related to the enforced practical ones as the fine arts to the useful or industrial, as painting to printing, as sculpturing statues to paving streets, as playing the violin in a concert hall to beating a dinner-gong at a railway station. Hence, too, the universally observed fact that the most profitable — in fact, for culture purposes, the only highly profitable — study is that in which one is *interested;* nothing is done well that is not done *con amore.* Now, the study that interests is no longer work, it has become play, not what we have to do, but what we want to do, an unforced and unimpeded outflow of energy.

If this be true — and there seems to be no doubt of its truth, however exposed to misconstruction and perversion — it becomes clear that higher mathematics must have especial significance for culture, for it is preeminently a free product of the spirit, an untrammeled sport of the intellect, a voluntary choice of the pure reason. To say that the forms of activity which the mind spontaneously devises for itself, in its highest moments, are not favorable to the growth and development of the mind itself would be to fly in the face of any reasoned theory of life, particularly the prevailing evolution theory, and would be like saying that the natural sports and mock battles of tiger cubs and children are ill-suited to make them strong and supple.

We may now advance more confidently from such general considerations and inquire minutely what there is in higher mathematics that especially makes for culture. First, then, mathematics is peculiarly the discipline in which *exact thought* is possible. The merely formal process of comparing and compounding judgments, as by syllogism, is not all nor most of logical thinking. It is true, notoriously true, that even herein mathemathics affords an invaluable and almost indispensable discipline. This truth is, indeed, too familiar to dwell on ; but such is not the main matter. The essence of thinking is found in *Begriffbildung*, the formation of concepts. As the cell is the morphologic unit in the world of life, so the concept is the logical unit in the world of thought. As the growth of the physical organism consists in the continual formation of new cells, and their combination and recombination with modifications or special adaptations into still complexer aggregates or organs, so the development of any system of thought — yea, the growth of the mind itself — consists in the continual generation of new concepts and their synthesis into more and more complicated unities. Now, the primal condition of such organic constitution of simple elements is their exact delimitation. This latter is accomplished in the world of life by the cell wall; it is at least attempted in the world of thought by precise logical definition. As no stable or complex organism could be built up out of non-cellular undifferentiated bioplasm or life-stuff — it would speedily collapse in a heap — so, too, no system of thought, no consistent consciousness, can be built up of unformed mind-stuff, not sharply bounded off in concepts. It is just because of this lack of precise definition in our notions that incoherence finds such place both in our lives and in our doctrines. If our notions were clearly and precisely defined, if we knew exactly what we were talking about, the laureate could not say

> Our little systems have their day,
> They have their day and cease to be.

Our philosophies would not then perish of inner contradiction, fading like the flower of springtide, but would grow and flourish thru the undistinguished lapse of ages, more like the "Starker Baum" of which Rückert sings:

> Der ein Sommertausend lebt,
> Nach verträumtem Winterstraum
> Neue Lenzgedichte webt.

Now, the higher mathematics presents the one region in which the formation of such exact notions is thus far possible, or at least actual. Here the process proceeds apace with accelerated velocity to astonishing creations. Time fails me to discuss, and it would be useless merely to name, even the most important of these wonderful ideas which, like solid masses of marble, the Phidian genius of Gauss and Abel and Jacobi and Riemann and Cayley and Sylvester and Hamilton and Weierstrass and Sophus Lie, those mighty master builders, and their peers, have shaped and piled up into colossal temples, not made with hands, and everlasting.

But it is not only the mathematician and his own habitat to which such considerations apply. Even as a magnet or an electric current determines all space around as its field and penetrates the universe with its lines of force, so does mathesis inbreathe every outlying science with its own spirit. The term, in fact, means learning, and might not improperly be defined as the universum of exact thought. The resistless tendency of thinking, as it becomes more and more precise, is to become more and more mathematical. Biology, as it becomes scientific, resolves itself into chemistry; chemistry similarly resolves into physics; physics likewise resolves into mechanics; and mechanics finally resolves into mathematics. Scarcely less noteworthy than this mathematization of the natural sciences is the mathematization of moral sciences, as political economy, logic, metaphysics. All of these have felt and are feeling and will feel, in augmenting measure, the subtle contagion of arithmetic and geometry. Very recently it has been thought worth while to write a calculus for the especial use of students of social, political, and financial phenomena.

Boole's mathematical treatise on the *Laws of Thought* was perhaps the most notable contribution to the subject since the days of Aristotle, and logic has now become almost a branch of subjective mathematics. Philosophy, too, must render account of space and time, and in her treatment must take her cue from mathesis. Since the appearance of Kant's *Kritik* no other single thought has wrought so deeply for the transformation of metaphysics as that developed in Riemann's inaugural dissertation, *Ueber die Hypothesen, welche der Geometrie zu Grunde liegen*, wherein our space appears as only one very special example of the great class of *n*-fold aggregates. Consider, too, the revolutionary significance for Kantism itself of the analytical researches of Helmholtz, so independent and yet so confirmatory of Riemann's, as well as Poincaré's application of the notion of group to account for the tridimensionality of our empirical space. Indeed, it is not too much to say that the philosopher of the future must of necessity be a mathematician — not, to be sure, a professional analyst, but well instructed in the methods, familiar with the results, and informed with the spirit of modern mathematical speculation. Over the door of the temple of philosophy, as of the school of Plato, must henceforth be written, Μηδεις ἀγεωμετρητος ἠ ἀναριθμητικος εἰσιτω. How deeply the mathematical spirit has penetrated metaphysics must be evident to whoever reads Lotze or Herbart or Wundt or Royce or Peirce or Howison, and how serious a matter is the lack of adequate mathematical culture must impress whoever studies attentively Sir William Hamilton's *Philosophy of the Conditioned.* If anyone has mastered the elements of the modern theory of numbers, based upon the process of counting, is it likely that he will go back to Descartes and Newton and try to develop the psychology of number as a ratio and the outcome of measuring? The Beneke Stiftung has recently proposed as a prize problem the philosophy of continuity, in its broadest aspects; does anyone suppose that a discussion not grounded upon deep mathematical knowledge will be considered by the judges? Lastly, what are the psychological, or rather neurological, laboratories, now rapidly multiplying in every civilized land, but an attempt to introduce the exact methods of mathematics and physics into the study of the phenomena of mind? It must, then, be abundantly evident that mathematics is fast infecting every branch of science with its methods, and still more with its spirit.

And this holds true in a still larger, yet unmentioned sense. One of the most notable tendencies of higher mathematical study is to enliven the sense of possibility, to break down the walls of prejudice, to expand the horizon of hypothesis, to widen the realm of maybe. The natural inertia of our minds disposes them to rest securely on axioms, so-called self-evident truths, which are often not true, much less self-evident, and to put their trust in maxims which are often more honored in the breach than in the observance. This tendency tinges our whole life, it colors our thoughts and our actions. It issues in narrowness, one-sidedness, monotony, rigidity, and a dead formalism. Now, there is no other form of culture that so effectively opposes this Chinese stagnation as the higher mathematics. "Why," it was said of Gauss' *Disquisitiones Arithmeticæ,* "the young man leaves us no ground at all to stand on." While consequences flow from assumptions with inexorable necessity, yet in assuming there is allowed the largest liberty, in fact all things are possible. Παντα μοι ἔξεστι is the watchword of the mathematician. He acknowledges no authority but reason; neither creed, nor person, nor tradition. For him the Euclidian geometry is only one of at least four possible geometries, of equal logical rights. For him the rays of the sun may very well return upon the sun, or converge upon the anti-sun. For him it is an open question whether the sum of the angles of a plane triangle be equal to a straight angle, or greater, or less. In his realm of numbers imaginaries and ideals mingle on equal terms with reals. He admits all manner of singularity, he wears the conscious yoke of infinitely varying supposition. For him all the conceivable is as good as actual; yea, when the wings of his imagination droop and fail, the wings of his reason bear him steady and untiring on. So he does not shrink from the notion of space of four or even *n* dimensions, but he investigates its properties and calmly inquires whether the intuition of it might not be possible to our organism under conceivable conditions of experience. This boldness, this intrepidity, this broad-eyed, calm-browed, deep-piercing intellectual vision is an especial fruit and a special mark of the highest mathematical training. In the words of the great apostle, we may say the mathematical "spirit explores all things, even the depths divine."

This daring, adventurous mood, that made Lobatschevsky the Columbus of geometry—lone voyager thru unimagined spaces—this mood propagates itself to every province of thought and nerves the soul everywhere to romantic endeavor. Self-confidence not only heralds, but follows close in the wake of, great mathematical achievement, and spreads itself like an awakening dawn over all the faculties. The pride of intellect, thus nobly born, itself engenders high ambitions and inspires to vigorous effort in every province of activity; nor can any man name or reckon the triumphs in distant fields to which such self-esteem and heightened sense of manhood have stimulated and impelled. Every student knows the glow of conscious worth, the just self-exultation, the uplift of the soul that treads on the heels of distinct and assured mathematical victory. But no false elation and self-conceit need be feared. For nowhere else does detection follow error so swiftly and surely. Plausibility is of no avail, fame and eminence are idle, eloquence and ingenuity are vain and impotent. No one can err without almost instant discovery, and no error is reparable. Hence it is that the most rigid self-criticism is imperatively demanded, and no other form of culture begets habits of such infinite painstaking or more absolute conscientiousness.

But, while analysis has immensely expanded in many directions the horizon of the possible, in others it has defined and drawn that horizon with astonishing clearness and precision. Gauss showed, not only what regular polygons were, but also what were not, geometrically inscriptible in the circle. Abel put an end forever to the century-long efforts to solve algebraically the general equations of fifth and higher degrees. Weierstrass and Frobenius have shown exactly how wide the realm of numbers may be extended with conservation of the ground principles of counting. Lindemann has proved that the wrestling of circle-squarers have not merely been fruitless thus far, but that they must forever remain so; their problem is intrinsically insoluble; a superior angelic intelligence would not see how to solve it, but only perfectly clearly that it could not be solved. It seems at first a presumptuous sin of mathesis to say "thus far and no farther" to universal reason, but the justification is complete, and it is a weird and wonderful vision, striking the soul thru with religious awe, this of the pure intellect, like Dante's Minos, tracing round itself with the wand of analysis the circle of its own possibilities.

Closely related hereto is the poise of the mathematical temper, the vision of things as they are. Nowhere else is it so true, the word of Hesiod, that the gods have placed labor before all excellence. Patience, industry, energy are indispensable to success, and their reward is ample and unfailing. Nevertheless, they are not sufficient. They can no more make a great mathematician than a great poet. The direct gift of heaven is in both cases necessary. Hence it is that mathematical culture teaches every instant the lesson of modesty, by continually revealing to us our limitations, by disclosing heights that we can reach only by long and steep ascent, but to which the sons of genius have been upborne as on wings of eagle. Moreover, this ethereal region is free from the clouds that elsewhere disturb the sight. The mathematician is but human; he is not exempt from the rivalries and jealousies, the petty vanities and other unworthy feelings, that vex the emotional and cross the intellectual life of his fellows. Nevertheless, his atmosphere is comparatively serene. We cannot think of his studies as conducted in any partisan spirit or for personal ends. However ambitious he may be, it is only honest, earnest, successful endeavor that can gratify his ambition. No pulls of any kind, social, political, or religious, avail in algebra or geometry. No patents are issued on methods of contact transformation; no trusts will ever be formed for exploiting groups or supplying integrating factors; no money can be made out of invariants or Riemann-surfaces. Such reflections apply happily in large measure to all pure science, but especially to mathematics, the purest of the pure. The mathematical mind sits solitary; like Bellerophon of old, it mounts aloft and launches its shafts out from the chill bosom of the desert air, "beyond the arrows, shouts, and views of men." It is quite impossible that such elevated and impersonal pursuits should not uplift and refine our nature, so far at least as any deed of ours can affect it. And here let me remark that I do not forget at any stage of this argument that the best and the most we can say of any study or calling or discipline is that it tends this way rather than that. Human nature, however, is a bundle of apparent contradictions, of currents and counter-currents; many characters seem built, like a ship, in compartments, between which there is no communication. The reason may be sound, but the will hopelessly diseased. The name of a man pure and beloved in private life may be the synonym of public corruption; or, inflexibly upright in office, he may be notoriously lax at home. So, too, the most perfect intellectual integrity, the most unselfish consecration to impersonal ideal ends, do not necessarily imply those minor graces of the spirit that embellish and ennoble the life of man. We need not be surprised at any time to see all the tendencies, however strong, of any training distorted or reversed by the overmastering force of inherited impulses; neither does it break the strength of our contention, the fact that the wisdom of the mathematician may often show itself to be, "not from above, but earthly, sensual, devilish;" only the probability and frequency of such discords are lessened.

To return from this digression, it must next be observed that higher mathematics, not less, perhaps even more, than any other science, brings the student into close and vitalizing contact with the infinite and the illimitable. It would seem at first that these notions are too vague and nebulous ever to become subjects of exact thought, but it is well known that this natural prejudice is quite erroneous. The ordinary notions of the infinite and of the infinitesimal, that is, of magnitudes great at will and small at will, in whose essence inheres the property of transcending by perfectly regular process any previously assigned degrees of magnitude or parvitude — these notions are capable of the exactest definition and allow among themselves an endless array of perfectly precise characterizations and distinctions. What is far more, however: the deep delving of Cantor in the doctrine of manifolds has grounded solidly the logical existence of the truly infinite, lying always over and beyond the finite, not merely surpassing it at every stage of its variation. All sorts of orders and relations among these transfinites may be treated with all the logical rigor that pertains to the treatment of finites. This disclosure of worlds of worlds, of ascents and descents unending, is at once stimulating and awe-inspiring. It is like the vision by the brook Chebar of the living wheels within wheels, or rather like the revelations of telescope and microscope and spectroscope, all in one. If the aspect of the starry heavens could bow the proud soul of Kant in reverence, surely the intellectual view of the transfinites of analysis and geometry, where inviolable order reigns as in a divine hierarchy, must strike the beholder thru with religious sense of sublimity and vastness, while expanding and extolling the self-consciousness with the feeling of mastery over the immeasurable. It is, of course, possible to parse and scan every line of Homer without hearing his music or being seized by his rapture, as a man may travel thru meadows and forests and valleys and mountains without seeing flower or tree or cloud or torrent, and along the ocean beach nor "hear the mighty billows rolling evermore." So, too, a teacher may undoubtedly guide a class skillfully thru the calculus without ever awakening any consciousness of the enchanted realm of open mystery thru which they are moving; and there may be eyes and ears that are by nature closed to such sights and sounds; *non cuivis homini contingit adire Corinthum;* but, in general, under proper tutelage even the non-mathematical mind will gaze upon the scene in fascination, with wonder and admiration. Propose to the class such a simple problem as to evaluate $\frac{\log x}{x^n}$ for x increasing without limit. They may derive mechanically numerator and denominator, and find the limit of the quotient for the critical value, and so make an end of it; but let the teacher pause and develop the significance of the answer, 0, showing, as it does, the infinitely low order of the infinity of the logarithm; let him point out how the logarithm does, indeed, follow its argument on toward infinity, but at an ever-slackening snail's-pace, dragging itself forward more slowly than at any namable rate, and yet infinitely faster than the logarithm of the logarithm itself; let him illustrate and emphasize this elementary fact, and mark whether the fancy of the most philistine is not touched, whether interest is not aroused, as at some strange spectacle, the eye enkindled and the pulse quickened at this unveiling of the unimagined and unconceived. Students of no mathematical turn, of marked linguistic leaning, have testified and will testify that the calculus, and even analytic geometry, in college have stimulated them as no other studies, have opened up illimitable vistas of thought, and have engendered undying thirst for the transcendent and supersensual. Does not a great light arise upon the mind that perceives for the first time the simple, yet subtle, Riemannian distinction between boundless and infinite? We speak of the omnipresence of God, and with Goethe we call him the All-enfolder, the All-upholder; yet rarely do we attach any real significance to these lofty terms; our imaginations persist in locating him afar off in the recesses of space, whence his all-piercing eye subtends the universe under an acute angle and takes instant cognizance of the minutest happenings; the sublimest pantheism finds him everywhere, only by finding him nowhere. The effect, then, is startling when metageometry assures us of the perfect possibility of God's literal and spatial omnipresence and all-enclaspment. We have only to conceive of him as a fourfold or n-fold extended being, so that our empirical space would be at most a cross-section of deity, an evanescent phase of the divine nature, which would enfold and touch it as a mere borderland at every point, as truly and precisely as the bubble blown by the child is enveloped and upborne at every point by the surrounding air. It is not here contended that such is really the relation of God to the universe; it is intended only to show by a single example how the higher mathesis expands and illumines our conceptions and fits on new wings to our imaginations.

Lastly, it is in mathematics beyond all other sciences that the spirit of man holds converse with the immutable and eternal. The spectacle of unceasing change in the process of nature has in all ages fascinated the inquiring mind and sown the seeds of philosophy in the meditative soul. Παντα ῥει, παντα χωρει, said Heraclitus: all in flux, all in motion. No man can put his foot twice into the same stream. The individual life is swept along like a transient eddy in the ocean of the life universal; or it glows for a time like an inconstant flame, and beats off the night from about it, and is quickly swallowed up again into the maw of darkness. Modern investigation has deepened and intensified the ancient conception. It sees swift and pauseless change where the Greek might raasonably have seen rest and perpetuity. In the marble repose of the statue the modern beholds only a molecular whirlwind; for him the stars are drifting, the constellations are falling forever asunder, and the atoms themselves look like passing vortices in a curdling subfrictional ether. The philosophy of Plato was a sublime reaction from the doctrine of impermanence. It yielded earth and air to Heraclitus, but pitched on high, in the realm of ideas, the tents of the eternal and unchangeable. Modern science may be defined as the quest of the intellect for constants, but these constants too often bear the brand of the provisional, the inexact, the contingent, the arbitrary. So true is this that able savants have seriously questioned the Newtonian law of gravitation as being too ideally exact and simple, too smooth and unconditioned, unlike other laws, which have so many ragged edges. In fact, it seems gravely doubtful whether the totality of the facts of nature conform to any law or laws; whether such as admit of more or less exact description in laws be not a very small fraction of the whole. Be this as it may, it is in mathematics alone that this quest for constants finds its surest and noblest quarry. Whatever doubts we may admit or cherish concerning the actual constitution of our empirical space, the eternal correctness of the Euclidian geometry is in no wise impugned. It stands like a living, ever-growing temple, not merely imperishable and ageless, but changeless, save by growth, and timeless. If the flight of ages should sweep us into a region of space with finite curvature, tho the theorems of Euclid would have no application to such a space, they would still hold with unimpaired validity of the homaloidal space for which they were enounced. The like may be said of the equally rigorous geometries of Lobatschevsky and of Riemann. They stand complete and perfect and indefectible, above and beyond time, not merely everlasting, but eternal. Not less, nay, if possible, even more immovable and immutable are the theorems of analysis. But it is not merely or mainly in the discovery and establishment of always valid propositions, as ordinarily understood, about triangles and circles, roots and equations, that mathematics finds its true concern with the unchangeable. Modern geometry and analysis are busied particularly with geometric properties and algebraic expressions of a still higher nature, which remain unaffected when the geometric or analytic form is submitted to a closed series of transformations, and these profounder permanences constitute the subject-matter of the doctrine of invariants, these immutabilities in the midst of mutation. And here it is that art clasps hands with mathematics, tho lying apparently at the opposite pole of mentality. For mathematics is a search for the invariable amid variation, a contemplation of the universe under the aspect of eternity; while art no less strives always toward the same goal, of course from another bound and under another impulse, not to discover but to create, yet with eye set ever on the unalterable, the abiding types of immortal beauty, the universal amid endless particulars, the changeless amid the ceaselessly changing.

> "As all nature's thousand changes
>   But one changeless God proclaim,
> So in art's wide kingdom ranges
>   One sole meaning still the same:
> This is truth, eternal reason,
>   Which from beauty takes its dress,
> And serene through time and season
>   Stands for aye in loveliness."

Here, then, we apprehend a deep underlying essential unity in these two complementary aspects of our nature, the æsthetic and the scientific. They are obverse and reverse of the same coin. The plastic and mathetic instincts both root in the same play-instinct, the same resistless impulse to self-realization thru activity, and both drive on the spirit thru the transient and temporal toward the permanent and eternal. Now, if anyone doubts that this immediate presence of the immutable does quicken, exalt, and stimulate the soul of the student, let him make a simple experiment. Let him present vividly to a class in co-ordinate geometry the most elementary invariant properties of a conic; let him unfold clearly the notion of cross-ratio, or in any other way bring the pupil's mind into conscious relation, not with any empirical constants, but with the rational constances of either algebra or geometry; and then let him mark whether the mind does not seize eagerly upon these fixed pillars of trust, whether interest is not straightway aroused, the fatigue of attention dissolved, and the countenance lit up with the glow of intelligence. It is cheap and easy enough to pooh-pooh idealism of every kind, to cry "extravaganza!" and to shrug the shoulders at experiences one's self has not met with; but the zealous teacher, not to mention the creative thinker, will confidently challenge comparison of his contentions with the facts in the case, will calmly answer: "Come and see."

In conclusion, this doctrine is no new doctrine. The ennobling, elevating, inspiriting power of higher mathematical studies—in other words, their culture value as herein set forth—has been recognized in every age of large enlightenment, but never more truly or splendidly expressed than in the famous quatrain of Ptolemy, which you will allow me thus to translate:

Though mortal, doomed to live a day,
When I the planet paths survey,
  This dust my feet despise;
Up to the throne of God I mount
And quaff from nectar-flowing fount
  The nurture of the skies.

DISCUSSION

THE CONSTANTS IN MATHEMATICS

BY DR. EDWARD BROOKS, SUPERINTENDENT OF PUBLIC SCHOOLS, PHILADELPHIA, PA.

The science of mathematics begins with the idea of number. The objects of the material world present themselves to the senses, and the idea of number arises in the mind by an act of intuition. As the mind matures, it emancipates itself from objects and lifts the idea of number up out of the domain of sense-perception, and deals with numbers and their relations independently of sensible experience. These numerical conceptions need expression, and man invents a numerical language, which in time develops into the Arabic notation and the decimal system. By three fundamental operations — synthesis, analysis, and comparison — the different numerical processes of pure arithmetic are unfolded. With the progress of intellectual development, numbers are involved in problems requiring an unknown result from given known numbers. At first the Hindoos and their interpreters, the Arabians, as well as Diophantus, expressed this unknown number by a word; but eventually symbols were introduced to represent unknown numbers in distinction from the Arabic digits which indicated definite known numbers. A further generalization of numerical ideas created a necessity for general symbols for known quantities, which, in the sixteenth century, was met by Vieta, who introduced the letters of the alphabet for this purpose. As the algebraic calculus developed, it was naturally applied to the solution of geometrical problems, which in the seventeenth century led to the beautiful and ingenious method of Descartes — the representing of geometrical quantities by co-ordinates. Thus we have $y = ax + b$ for a straight line, $y^2 = 2px$ for a parabola, $a^2y^2 + b^2x^2 = a^2b^2$ for the ellipse, etc. Here we reach the distinction between constants and variables, as in $y = ax + b$, a and b are regarded as constants, while x and y are variables.

This distinction between constants and variables, while generally accepted, is, after all, only a relative one. In the equation of a straight line x and y vary infinitely for any one value of *a*, but the line represented by the equation may have an infinite number of positions, and therefore *a*, the tangent of the angle made by the line with the axis of abscissas, may vary between zero and plus or minus infinity. Thus the so-called constant *a* is itself a variable; and the same may be said of the so-called constant *b*, which indicates the distance from the origin at which the line cuts the axis of ordinates. The same is true of *p* in the parabola, of *a* and *b* in the ellipse, and in general of the so-called constants of any curve. It is thus seen that the quantities we have been accustomed to call constants in mathematics are only relatively so; that in reality they are not constants, but variables, and as much so as the so-called variable quantities themselves.

Disappointed in not finding constant quantities where we naturally expected to find them, let us search a little farther for their existence. Jevons in his *Principles of Science* speaks of "natural constants," and classifies the subject roughly under the several heads of "Mathematical Constants," "Physical Constants," "Arithmetical Constants," "Terrestrial Numbers," "Organic Numbers," and "Social Numbers." Without examining these in detail, it is sufficient to say that there are no physical constants. No object of the material world is the same today, yesterday, and forever. The earth, the moon, the sun, the stars are all variables in size, composition, distance, etc. The diameter of the earth, its distance from the sun at different times, the intensity of the sun's rays, etc., are all variable quantities. The forces of the material world, as gravity, electricity, etc., are as variable as the objects to which they belong. Man makes his measures of length for the purpose of having invariable standards; but the French meter, tho theoretically the ten-millionth part of the distance from the equator to the pole, and also English yard, determined by the seconds pendulum, vary in length with the temperature to which they are exposed. The kilogram of the archives weighs more than four-thousandths of a grain more than the kilogram deposited at the Ministry of the Interior in Paris; and the English weight units are equally variable. There are no natural constants in the material world, and man's attempts to make artificial ones are only approximately successful. Here again we are disappointed in our search for the invariable and constant; but, not discouraged, let us look in another direction and see whether we cannot find some mathematical elements which are really constant. We have sought in vain for constants among symbols of quantity and among material things; let us now look at the relations of quantity, which will carry us into the domain of pure thought and abstract mental products.

Returning to arithmetic, we find in the sphere of pure number certain combinations which bear certain definite relations to one another. These relations are absolutely true and invariable. Thus 4 and 3 are 7 today, tomorrow, and forever; even tho Mill was driven by Hamilton to assert, in order to escape a dilemma, that one might conceive of a world in which 4 and 3 might be something else than 7. So the Pythagorean table of products expresses truths that never vary, but which are absolutely and constantly true. We thus find in the combinations and relations of numbers a multitude of truths that never vary and which, therefore, properly represent the constants of mathematics.

Passing from arithmetic to geometry, we reach relations of form that are equally steadfast and unchanging. The axiomatic principles which constitute the basis upon which the science is built express invariable truths. The proposition, "things equal to the same thing are equal to one another," expresses a truth to which no exception or variation has ever been found. The logical deductions from these axioms, as premises, are equally certain and invariable. No exception has ever been found to the discoveries of Pythagoras, that the sum of the angles of a plain triangle equals two right angles, except theoretically by the non-Euclidians, and his discovery that the square on the hypothenuse equals the sum of the squares on the other two sides is a truth for the ages. The relation between the diagonal of a square and its side, or between the circumference and diameter of a circle, may not be expressed by numbers, but their relations are as invariable as the truth of the simplest axiom. When Archimedes proved that the surface and contents of a sphere are respectively two-thirds of those of the circumscribing cylinder, he gave the world a beautiful truth that will endure thruout all time.

The reason for the absolute constancy of these truths is that they are derived by logical processes from self-evident and necessary truths as premises. Galileo guessed that the area of the cycloid was three times that of the generating circle, and endeavored to prove it by experiment; but the truth only became an incontestable one when his pupil, Torricelli, had demonstrated it by deductive reasoning. When Huygens, in 1657, demonstrated, similarly, that the length of the cycloidal curve is four times the diameter of the generating circle, and, also, that it is the curve of equal descent; and when, forty years later, in 1697, John Bernoulli discovered that it is the curve of quickest descent, they gave to science imperishable truths that not even the skepticism of a Hume or Mill can doubt or question.

From this discussion it appears that constants are not found in the material universe or in the relation of material objects. There are no objects which are invariable, and consequently there can be no constant relations between material objects. The relation between the circumference and diameter of a circle is an invariable one, no matter how the circle may vary in size; but this is not true of any material circular body, for the eye never saw a true circle, neither can the hand make one. Constancy exists in those ideal and intuitive conceptions of number and form, and in the relations of their elements. It is, therefore, in the mind that we really find certitude and constancy and invariability and absoluteness of truth. What shall be said, therefore, of that phase of modern psychology which asserts that all knowledge is but the sum of impressions made upon the cortex, and that the highest philosophy is but the result of molecular activity in the brain? If this were so, how could we account for the constancy of the relations existing between our conceptions of quantity and for the absolute certainty of our knowledge? Thanks for a higher philosophy in which we cannot only posit a mind, but recognize it as a self-active intelligence wearing the crown of intuition and freedom upon its brow — a conception which gives the highest dignity to man, and the grandest meaning to the philosophy of education.

IS THE SCIENCE OF MATHEMATICS QUALITATIVE AS WELL AS QUANTITATIVE?

BY FRANK H. HALL, SUPERINTENDENT OF THE STATE INSTITUTION FOR THE BLIND, JACKSONVILLE, ILL.

When this query was submitted to me by our Committee on Program, I, in turn, submitted it to many scholarly gentlemen, telling them of the task imposed upon me, and asking their assistance, or at least an expression of opinion upon this question.

The feature of the replies of specialists in mathematics which has reference to the data from which conclusions are derived is especially interesting from the fact that it touches the entire field of pure and applied mathematics.

One, Arthur Lefevre, of the University of Texas, says that "projective geometry in the purity of its recent development is displayed as a mathematical treatment well-nigh devoid of quantitative relations, and dealing almost entirely with qualitative relations of spacial manifoldness." A second, Florian Cajori, of the College of Colorado, cites in proof of his affirmative answer the following problem: "To find a number the positive integral powers of which shall terminate with the same n digits in order as does the number itself. If n equal 5, then 90,625 is a solution. $(90,625)^2$ equals 8,212,*890,625*. This is not a quantitative result, because we may alter the number indefinitely by writing to the left of the '9' any digits we please, and as many as we please." In other words these digits may represent a quantity infinitely small, or a quantity infinitely large, and satisfy equally well the conditions of the problem. The third, Dr. J. B. Shaw, of Illinois College, bases his affirmative answer, in part, upon the fact that mathematics deals with positive and negative quantities. A negative number does not represent a quantity "less than nothing." Such an expression is an absurdity. Quantitatively minus 4 equals plus 4; the difference is purely qualitative. The fourth, Simon Newcomb, of Washington, D. C., says that "It seems to me that a quantitative science is necessarily qualitative. Length, weight, etc., do not cease to be qualities when expressed in number."

Another says: "A majority of the theorems of modern geometry deal with qualitative distinctions, and qualitative distinctions in number and angles have been as conspicuous in mathematics since Descartes as the quantitative relation of these magnitudes."

Dr. Harris, in his *Psychologic Foundations in Education*, in a very interesting chapter on the "Psychology of Quantity," says: "The thought of quantity is a double thought. It first thinks quality and then negates it, or thinks it away. In other words, it abstracts from quality."

It thus appears that, whether or not "mathematics is a science of quantity," it has its beginning in quality, and all along the line qualitative distinctions are implicated. In the common applications of the pure mathematics to problems in time, space, weight, and intensity, we deal with units that are both quantitative and qualitative.

One distinguished mathematician who kindly responded to my cry for help declares that "the qualitative nature of the projective geometry is enough to close the mouths of *ignorant disputants*, who would attempt to restrict the science of mathematics to quantitative relations." In view of the fact that he is in substantial agreement with all those who love mathematics, as some artists love art, for its own sake, it will, I am sure, be the part of discretion for me and for all those who, like myself, study the science of mathematics mainly *for the sake of its uses*, either to give assent to the modern idea that mathematics is *not* exclusively the science of quantity, or to allow "projective geometry" to close our mouths, and thus, ingloriously perhaps, save ourselves from the charge of being "ignorant disputants."

THE EDUCATIONAL VALUE OF GEOMETRY

BY KELLY MILLER, PROFESSOR OF MATHEMATICS, HOWARD UNIVERSITY

A science is characterized by the nature of its subject-matter and the manner in which it is treated. The educational value of a subject of study depends largely upon its suitability to the stage of the mind at the time when it is pursued. Of all subjects, geometry is perhaps best suited to strengthen the reasoning faculties in their early stages of development. Here we have a perfect system of reasoning, which is neither too abstract nor too difficult for the young mind to grasp. Indeed, geometry combines the advantages of an abstract and a concrete science. While its concepts are purely abstract, they are nevertheless subject to so many concrete illustrations that the learner, for a time at least, may wisely be kept in ignorance of the fact that he is not dealing with real, tangible entities. The purely concrete treatment of the subject is bound to find a larger place in the programs of the future.

It is but natural to expect the mind to grow by what it feeds on. As geometry presents a perfect system of reasoning, it cannot fail to develop the reasoning faculties. The simplicity and perfection of the system depend upon the following principles:

1. The subject-matter is of the simplest possible kind. Geometry does not busy itself with the metaphysical perplexities of space, but treats of its simplest elements — the point, the line, the surface, the solid, and the angle. With all of these the learner has already become acquainted by reason of familiarity with their concrete representations.

2. The geometrical properties of figures are size, shape, position, and capability of motion. These are clearly understood, because they are among the primary properties of material objects.

3. Every science must rest upon some fundamental assumptions. The primary assumptions of geometry are (*a*) definitions, or definitive propositions whose truth is contained in the form of the statement; (*b*) axioms, or self-evident propositions whose truth must be acceptable to all who can understand the terms employed; and (*c*) postulates, or constructive propositions whose solution must be granted by all minds that are accounted sane. For three thousand years no sound mind has ever, in good faith, doubted the validity of these assumptions. The whole superstructure is built upon this solid foundation.

4. The logical machinery is exact and rigorous, tho so simple and easy of manipulation that the learner uses it with skill, without even suspecting the existence of such a thing as formal logic.

The methods of reasoning are :

(*a*) The direct method, in which the conclusion is derived from known truths by a process which is so natural that it would be folly to attempt to define it.

(*b*) The *reductio ad absurdum* method, in which we conclude that a proposition is true, because its contrary leads to the contradiction of some known truth.

(*c*) The method of exclusion, in which we make all possible hypotheses concerning a proposition, and show that all but one of them are false. The excluded one must, therefore, be true.

(*d*) *A fortiori* method, by which we conclude that if a is greater than b, and if b is greater than c, therefore, for a greater reason, a is greater than c.

(*e*) Method of limits, which affirms that whatever is true of a variable in all stages of its variation is true of its limit. These methods are all convincing, and the verity of the conclusions thus established can be relied upon with the fullest assurance.

The study of geometry leads to a correct use of language. There are three kinds of language: (1) common language, such as is used by children and uneducated people to express their ordinary needs and necessities; (2) scientific or exact language, in which words are used with a fixed, rigid significance, meaning no more, no less, and no other than they expressly state; and (3) literary or refined language, which expresses the finer phases of thought and feeling. The child always comes to school with the common language on his lips; if he comes from a cultured and refined home, he may there gather from familiarity and use polished and refined expression, but scientific language can only be gained by dealing with those subjects where the lines of thought are sharp and definite. Language is not an original process, and does not exist for its own sake, but is only a vehicle to convey the precious burden of thought. Clear thinking will compel clear utterance. The surest way to teach the child to say something well is to teach him well something to say. The attempt to teach language in its barren isolation has always seemed to me to be unwise educational policy. As geometry furnishes the clearest system of thinking, it will afford a most valuable linguistic discipline.

The study of geometry cultivates the logical memory, by which events are recalled by means of their inherent logical relations. This habit, when once acquired, soon extends to the varied relations and problems of life.

The truths of geometry, when once understood by the learner, become his own personal possession. It is no longer the truth according to Euclid, or the truth as it is in Wentworth, but the truth as it lies in the mind of, and is assimilated by, the recipient. The student is fairly entitled to adopt the words of Montaigne : "'Tis no more according to Pluto than according to me, since he and I both equally see and understand." This certainty of possession awakens intellectual dignity and pride, and stimulates the mind to wider self-activity and larger acquisitions.

THE SOCIAL BASIS OF CONSCIENCE

BY PROFESSOR JOSIAH ROYCE, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

[ABSTRACT]

In this paper, of which here only a summary can be given, an effort was made to trace, both in the history of the race and in the life of the individual, some of the principal factors which have determined the development of the higher levels of the moral consciousness. The word "conscience" was used by the lecturer in a somewhat restricted sense, as a name for the principle, or the collection of mental principles, which determines precisely these higher levels of moral consciousness. One has a conscience when he conceives duty as more or less definitely one, when he conceives it more or less definitely absolute, and when he conceives its contents as a single law. In the evolutionary history of conscience the lecturer first traced the transition from the savage stage of moral consciousness to the civilized stage. The savage possessed numerous moral impulses, that is, social impulses which could be made of use for moral development; but he possessed these in a very capricious relation to impulses which were not moral. For instance, kindness and cruelty, industry and slothfulness, are capriciously found side by side in his nature. Nevertheless, he possessed nearly all the bases for the civilized moral nature, yet he did not possess that organization of moral nature which constitutes conscience. Secondly, the savage possessed customary morality of a very complex grade. The customs of the tribe involved much self-sacrifice on the part of the individual. The authority attributed to moral law is also possessed by savage custom. Yet savage custom, and the customary morality founded upon it, nowhere reach the level of conscience. In the third place, the savage is extremely religious, if by religion is meant practical relation to an unseen world. In the tabu the savage possesses a reverence for the unseen, or, at all events, a dread of the unseen, which involves a great deal of self-restraint, and which notoriously forms the basis for the later development of the concept of sanctity. For an object that is tabu, or that is dedicated to the gods or to the spirits, becomes what is later called sacred, in so far as the individual must respect it, or restrain himself in its presence. Savage religion thus unquestionably-influences conduct, and in directions which later became of importance for the evolution of conscience. Yet none of the foregoing three factors are sufficient to make the savage, as he usually is, possess what can be called a conscience. For the impulses of the savage, whether good or bad, remain capricious; his customs have no ideal unity, and the tabu of his unseen world of spirits has no definite relation to any morally significant duty belonging to the conduct of life.

The transition from the savage stage of morality to the civilized stage is made when these three factors assume a new relation. The change is especially determined by what happened in the savage religion as it passed to the civilized stage. The laws of the unseen world became definite and united, the divine beings tended to be conceived as one; and, in consequence, the tabu — that is to say, the collection of restraints and commandments supposed to be due to the invisible world — became more organized, as the invisible world itself became simplified. With the unification of the religious ideal there came to pass a tendency toward conceiving customary morality in the light of this ideal, and, in consequence, the desire to organize the impulses of the inner life in accordance with the new ideal was gradually developed. The lecturer endeavored to show at some length how, out of this combination of religious idealism, of a tendency toward a reformed customary morality, and a consequent respect for the organization of the inner life itself, a conscious ideal of holiness, of sanctity, or, in some cases, of wisdom, came to supersede the earlier forms of moral consciousness, so that, as a result, the conscience in the higher sense was evolved.

The result of this analysis of the social evolution of conscience in the history of the race was, according to the lecturer, the indication that the unseen world has had a very important relation in the minds of men to the development of the higher moral ideal. While, on the other hand, it is perfectly true that this development was only possible when the unseen world came to possess particular characters.

The lecturer hereupon proceeded to a study of the moral evolution of the individual, and to a statement of the parallel between the evolution of the child and the race, with reference to the same factors as were studied in case of the evolution of the race. The child has capricious moral impulses side by side with equally capricious anti-social impulses. He early acquires a pretty rich, and, it may be, a very pedantic, customary morality. He is likely to possess a strong interest in the unseen world; and he may repeat many savage forms of tabu, that is, dread of the unseen, and of acts founded upon such dread. All these constitute in the child, as in the race, the bases for the evolution of conscience. But none of these factors are sufficient to constitute conscience, which, in the child as in the race, is an evolution, and is not innate. The problem of the education of conscience is the producing in the child of an organization and rearrangement of these three factors, parallel in some respects to the sort of organization and rearrangement that occurred during the transition from savagery to civilization, when the ideal of holiness gradually developed out of earlier forms of tabu. The lecturer endeavored to show at some length in what way it remains true, whatever the particular creed of any individual, that it is only by relations to unseen, or ideal, comrades, friends, heroes, or authorities, that the higher rational and moral evolution can take place. Conscience, even in the most impersonal forms, is conceived as a sort of ideal comrade. The actual life of customary morality is full of conflicts and inconsistencies which offend the practical reason. Only in the inner world of imagination or of ideal construction can one come to conceive of a harmonious plan in life. Since this plan is first conceived from within, the formation of it involves a grade of self-consciousness which makes one henceforth judge conduct, not in the light of its conventional qualities, nor in the light merely of its outward results, but in the light of its intentions. So that, in the individual as in the race, the unseen world, however conceived, is, as the world of one's own inner conceptions and comradeships, at once the world where self-consciousness can develop with a sense of freedom, where a harmonious ideal of the plan of life can be, however dimly, suggested, and where, in consequence, the notion of an absolute law, of a rule of life invisible, but universally valid, can be framed. The lecturer undertook at some length to show how a child's play with ideal comrades, his hero worship, his disposition to conceive in ideal terms his own future self, and similar tendencies, may all play, as they grow, the part in his life which the more idealized forms of religion played in the earlier evolution of the race. These considerations were used to indicate under what conditions a religious creed that comes with the definite authority can be made of service to the child's own inner life. It is not the external authority, but the inner idealization; it is not the knowledge of visible custom, or even obedience to valuable principles, that can develop the true conscience. The true conscience comes when social relations with an ideal world, however conceived, become rich and complex enough in the inner life to lead to the formation of the idea that in the real world harmony should reign, as from an ideal point of view it already seems to reign in the best part of one's inner realm of unseen guides and heroes. In sum, the theses of the paper were that conscience is not innate; that it does develop upon the basis of social sensitiveness and of customary morality; that the interest in an unseen world is of great importance for its full development; and that the transformation comes to pass when the ideal realm of the unseen, as religion or as hero worship presents it; becomes sufficiently organized to suggest a plan for harmonizing all life, and the absolute authority of the law. The essence of conscience is thus attained whenever the unity of the ideal law gets conceived. It is not necessary that one should ever reach any abstract statement of the law, or should be able to define one's duty in any but these perfectly general terms. Conscience thus wills absolute unity and harmony of life; but one who has a conscience may be to any extent in doubt as to just what means to use, at any given time, for the attainment of this ideal. Yet the law is conceived as none the less absolute on that account; and, in the evolution of conscience, one thus learns to put the ideal law beyond the customary law. Or, finally, one may define the possessor of conscience as one who views his life as the life of a citizen of a certain invisible city, whose law is the law of complete harmony.

DISCUSSION

H. E. **KRATZ**, superintendent of schools, Sioux City, Ia.—I am thoroly convinced, at this moment, that the man who attempts a ten-minute discussion of a profound sixty-minute paper on the "Social Basis of Conscience" manifests such a lamentable lack of judgment, or of "practical reason," that it will raise serious doubts in the minds of his hearers about the birth of his conscience. Perhaps the wisest course for me to pursue in my discussion of Dr. Royce's able paper is to say, in the words of the old school director: "Them's my sentiments, tew." In the main, I find but little cause for disagreement, altho some of the statements of the paper were at first a little novel, not to say startling; but when the content of terms used was carefully weighed, I found myself but little inclined to dissent.

A long, dreary road of struggle and development toward higher ideals lies between the animalism of the savage and the fraternalism of civilized man, between *tabu* and righteousness. This prolonged struggle of the race from sensualism to altruism possesses the intensest interest, not simply because it was a heroic struggle for the supremacy of higher ideals, but also because it parallels each individual's struggle from the sensual to the moral or spiritual.

The paper clearly sets forth three prominent features of savage moral life, viz.:

1. Social impulses similar to ours, but manifesting gross inconsistencies in mingling evil with good, such as manifesting kindness and sympathy one moment and wanton cruelty, or perfidious treachery, the next.

2. Helpless submission to custom, such as patiently submitting to the painful process of tattooing or the terrible ordeal of becoming a warrior of the tribe.

3. Excessively religious or superstitious ideas, as indicated by the savage surrounding himself with a world of spirits, but unfortunately moved by like passions as himself.

We can understand how these social impulses would become less gross and inconsistent in the clearer light thrown upon them from experience. We can see how the golden rule could slowly evolve from the teachings of experience. We can also admit that helpless submission to custom has a slight moral element in it which may lead from blind obedience to an external influence, to intelligent obedience to a voice within. The outward attitude of obedience may assist in inculcating the inward grace of true obedience.

We can also see how, in this progress toward righteousness, the savage would people the unseen world of spirits with a less and less gross, or immoral, order of beings, since these must be to some extent the reflection of himself. The gods, or god, must be constructed, apprehended anthropomorphically. Robert G. Ingersoll stated an important truth when he inverted the popular epigram and made it read: "An honest God's the noblest work of man."

And so, from the evolutionary point of view, man, as he rises to a higher moral plane of action, endows his god with higher and nobler attributes; and this nobler god, in turn, is pleased with the observance of a higher standard of conduct by man. Thus each acts and reacts to the uplifting, upbuilding of the other. Not that God is changed in this process, but only man's conception of God, and what is pleasing to him in man's conduct.

To some unphilosophic minds this may suggest a little of the same kind of philosophy which advocates that man can lift himself up by pulling on his boot straps. And yet this is not quite a parallel case. But why not make the Great Ruler of the universe a little more prominent factor in man's moral regeneration? Is it, then, so irrational, so unscientific, so unphilosophical, that it dare not be considered? While accepting evolution as operative in the invention or discovery of conscience, why shut out direct revelation of God's will, either by his word or thru the manifestations of his spirit? But this may be too baldly orthodox to suit the philosophic mind. It must be confessed, and with deep regret, that the pulpits of our land have emphasized entirely too much the supernatural and miraculous side of Christianity, leading its disciples to expect and depend upon direct divine interposition in their daily lives, rather than so to shape their lives that they will come in harmony with God's laws. Too many of our so-called orthodox pulpits are unduly exalting the work of the spirit, relegating the larger portion of the Christian life to the realm of the supernatural or miraculous, and thus tending to make a man a puppet rather than the arbiter of his own destiny. Against both these extremes I must raise my protest.

One of the most interesting features of Dr. Royce's paper is his discussion of the development of the modern child's conscience in the light of the development of the race conscience.

Any close student of children recognizes that the child in his moral development manifests the same characteristics which the paper points out in the moral development of the savage, viz.:

1. Social impulses similar to ours, but grossly inconsistent.
2. Helpless submission to custom.
3. Excessively religious or superstitious ideas.

The culture-epoch theorists have here some further material out of which to strengthen their theory.

Dr. Royce claims that the child's moral development, like that of the race, arises chiefly out of his conception of the invisible world. If the child be led to conceive of that invisible world as united, as having one consistent, humane, loving ruler, who is interested in him and desires him to act righteously — if this be *consciously* conceived by the child, conscience is born.

But the great danger here is, as the paper indicates, that these religious truths may become mere empty forms and exercise no regenerating influence on the child's life. This step in the evolution of the child's conscience needs most careful attention, and is one of the most suggestive and helpful features of the paper.

The paper seems to feel the need of something else than social impulses, helpless submission to custom, and excessively religious ideas to mark the evolution of conscience. Another element is brought in, which is called the "practical reason," and which seems to stand outside of conscience. To quote: "Customary morality is full of inconsistencies. The practical reason does not like these inconsistencies. Practical reason, in weighing conflicts of social ideals, ... is puzzled; yet in all this it still unconsciously seeks for unity. Its very effort to solve its puzzles involves an unconscious ideal of wholeness. Make this ideal conscious, and you will have a conscience." This practical reason, then, desires consistency of life, unity of purpose, wholeness of spirit, harmony in every act, and possesses this ideal yet not consciously. Only when practical reason becomes conscious of its ideal, then is conscience born, or discovered, or invented. These are rather fine philosophical distinctions. If practical reason dislikes inconsistency and likes consistency, can it be said that it is unconscious of these? But I have no desire to quibble over these fine distinctions.

Let me say, in conclusion, that the paper is a masterly presentation of the facts in the evolution of conscience, and cannot fail to carry with it the approval of candid, thoughtful minds. As those who guide the youth of our land, it should be our first concern to know that we have heard the voice of conscience, that the absolute plan has been whispered in our ear, and that its eternal meaning is definitely known to us.

CHARLES C. RAMSAY, Fall River, Mass.—In the case of an adult member of a civilized community, how far is the motive, the reason, the sanction, for doing a thing because others do it commendable?

PROFESSOR ROYCE.—That is an entirely unanswerable question, specifically, in the very nature of the case. Once any particular action of any organism performs a wholesome and useful function, you cannot tell, apart from the life of that organism, the value of that function, but only from its relation to the life of the organism. The doing of what other people do is unquestionably doing something; whether it is well to do what these other people do depends upon what they are doing or saying. The question can only be answered with reference to the harmony of the whole. It is always much more important first to consider that generally, in such a discussion as this, rather than specifically.

MR. RAMSAY.—Does it play a very great part or tendency, in the moral development of man, to respond to the demand of his fellows? In your opinion, does it account for the source or origin of moral obligation?

PROFESSOR ROYCE.—The sense of moral obligation proper is precisely the higher quality upon which I laid a good deal of stress. The individual must first reach the lower level of conscientious action. He would never reach this lower level, perhaps, without example. Therefore, unquestionably, the attempt at imitation is the beginning of the acquisition of wisdom. It is better to be imitative than to be merely capricious; altho, on the other hand, whenever you have reached the moral idea, you will find your moral consciousness perfectly ready to do something merely because that something is right.

MR. RAMSAY.—The moral judgment will come in and tell us what we ought to imitate and what we should decline?

PROFESSOR ROYCE.—Mr. Ramsay, it now comes into the region of the difficulty of the application of a general rule. I should say, in general terms, precisely this: the act of doing things because other people do those things is always the result of a motive belonging to the lower level. That will lead toward morality, toward the higher, and that is always better than mere obstinacy and willfulness. On the other hand, the higher level, where we have an activity and conscientious individual effort, is more desirable. Never, under any circumstances, sacrifice principle to conformity; about that there can be no doubt.

MISS MARSH, of Michigan.—Why is it that a child seems to have a stronger idea of eternity, of the future life, at the age of three or four than at a later period?

PROFESSOR ROYCE.—Whether that is universally true or not I am not certain. I have seen that interest in the future life very early; I certainly have seen it later, and I certainly have seen the absence of it very late. When one sees a very early interest in unseen things, it indicates generally that the child is very eager to take up those mysterious things which people tell him about, and consequently you will find him quite as much concerned in what he does not understand as what he does, if only someone authoritatively suggests the matter. Later in life people come to have definite ideas. They speak more definitely of things and principles. They have more definite notions and plans, which is one of the benefits of modern education. Then, sometimes, follows the age of rationalism, when, as we know, there is a revival of interest in the unseen.

MISS MARSH.—I take my opinion from answers given to Dr. Hall's syllabi on that question. I believe, out of several hundred answers that he had to the question, "When does a child first express an idea of infinity?" perhaps 80 per cent. placed the strongest idea at the age I have stated.

Professor Royce.—Some of those returns are necessarily subject to various interpretations, and it is difficult for us to speak without facts. All such data are very suggestive and useful. With regard to what is happening in any individual child, I feel sure we do not know, for our facts are not well enough collected.

Mr. Brand, of Philadelphia.—Would you approve of the tendency to recognize our educational system as an instrument toward the development of what might be termed an educated consciousness, that is, in the line of the effort of the present time to make moral character the conscious aim in education?

In the second place, would you be disposed to approve of the classification that has been offered by Dr. Harris and by Professor Butler, in the direction of giving harmony to our school curriculum, by the classification that says a child is entitled to its mathematical inheritance, to its literary inheritance, to its scientific inheritance, to its æsthetic inheritance, to its institutional inheritance?

If an educated conscience, if moral character in the sense of an educated conscience, is to be made the conscious aim of our educational system, is that conscious aim to prevail all along the line, or at the end of the system as at present organized in the United States? That is to say, should the conscious aim be at the apex of our system or in the elementary school?

Professor Royce.—In answer to these three questions, I have at once to explain that I feel decidedly the limitation of my own views, for I have small authority to speak of the organization of any educational system, being myself concerned with problems that lie decidedly out of that field, and having, myself, only a humble place in that educational system, as at present developed, as a teacher in one branch of the work.

To the first of the three questions the answer seems to be obvious, and I answer as I did the preceding question, that there is no doubt that the chief purpose of education is to make the best character in human beings possible to be made. I confess my entire ignorance as to the best way to classify educational systems. I suppose one may say that on this practical side a great deal of the work of the teacher must lie in the development of customary morality.

Secondly, I should say most distinctly: When a teacher is teaching mathematics and natural science, let him not then and there be concerned that it is all for the ethical purpose; let the result follow, but it is not necessary to mention it. It is precisely so in the conduct of all the work of the teacher. During all the work, the teacher should feel that a larger consciousness is the goal, and that can be reached in manifold ways. This goal may be reached by different persons in different ways. There may be dangers in developing too much of the æsthetic.

I should say, as a general answer to the three questions, that I suppose the result of organized activity, in so far as it is a part of our educational system, does tend toward that universal conscience which I should put at the head.

Professor Ormond, of Princeton.—I should like Professor Royce to state where he would locate, and how he would ground, that principle of free initiative in connection with the principle of conformity to the habit and principle of imitation. One of the most valuable features of the discussion is this contrast between plain morality, for example, and the ordinary motives of morality, on the one hand, and the sphere of religion, of the spirit world, using those terms in a large and unconventional sense, on the other. It seems to me the child has a right to that inheritance; it is part of the born inheritance of our humanity that the motives which spring from that unseen world are the most important motives in the evolution of our spiritual manhood, and it is therefore that we cannot afford to make them merely contributory to our moral development. I am one of those, therefore, always in favor of emphasizing to the uttermost the importance of the religious motives in the development of morality and of moral education.

PROFESSOR ROYCE.—In reply to the question of Professor Ormond, I should be entering a wide field if I attempted to be at all adequate, from my own point of view, in discussing this subject. There are suggestions contained in the paper; there is a theory of psychology and self-consciousness, and an attempt to trace moral development. What I meant by my "finite self" is always known to me as something, a man's own acts and feelings, set over in contrast with somebody else's; it is the contrast between another and myself. If you direct my attention, I try to follow, if I am trying to grasp your meaning. If you criticise me, I respond to the criticism. Now, in all such cases I am self-conscious. In ordinary conversation we have various phases of self-consciousness.

MR. SANFORD, of New York.—I have listened to this discussion with a great deal of interest. I have listened in vain for what I conceive to be the proper thought to be expressed in connection with this paper. I would not desire to do any injustice to the writer of the paper. I possibly may not have grasped the right idea, but it seems to me, if there is any trend in this paper at all to anything that is practical, it is a direct trend toward agnosticism, and if that be true, I say here and now, most emphatically, that I wish to enter my protest. I have consulted several leading members in this audience, and they have all said to me the same thing. Perhaps we do not understand it rightly. I do not believe that conscience is an invention of speech. It is placed in our bosoms by the creator of all the earth. I stand here today in favor of the God of Israel, not evolution.

MR. DYER, of Ohio.—Professor Royce tells us that the teacher must be candid; how can that teacher associate ideal characteristics with the actual person, without some lack of candor? When the time of disillusionment comes to that child, will he not be disappointed? Will there not be a revolt which will put that child in a worse state than if he had not thought on the subject?

Secondly, can any religious ideas be taught a child which do not cluster around an actual personage? Can he understand the abstract, or associate anything with the abstract; must it not be actual? In conclusion, how can we have religious ideas taught the child?

PROFESSOR ROYCE.—The questions are thoroly justified in themselves. Two different things come in sight at this point of the discussion, and they are very interesting questions: firstly, as regards the relation of the evolutionary theory of conscience and religion, which I take to be in the mind of the speaker before the last. I endeavored in two or three different statements in the paper to make perfectly clear what the relation is. In the first place, the paper itself is dealing with a theoretical question; not the question of faith from a philosophical standpoint or from any point of view, but with a human conception, to wit, a conception to distinguish between right and wrong in its various forms and degrees. What is manifested to the consciousness of the infant before six months of age, by those who have observed, leaves no doubt that all knowledge of truth grows with the individual as he grows. That the same is equally true with the race no student of human history has any difficulty in regarding as by far the most probable hypothesis. Yet, there is absolutely no light on any question as to what truth is. All knowledge is the result of growth, education, development, evolution. The human race has been struggling with all these problems, and they are gradually coming to be understood. There is no lack of harmony between the great truths in nature and in life.

There is no doubt, therefore, as to my position, and should be none with regard to my expression, in so far as I distinctly stated the purpose of the paper, and in so far as I again and again pointed out in passing that the invention of the conscience was also unquestionably a discovery. Every truth has to be unfolded to the race, or discovered. One need not fear that the truth is touched by any new discovery, however we regard the evolution of our knowledge concerning that truth.

Secondly, as to the religious training of the child, in the paper I endeavored to point out a suggestion that there may well be a wide difference in theological beliefs, and perhaps a variety of religions, and that they must all be developed; and it was my purpose

that thru the moral development of the child the best results would be attained. A knowledge of God can only be acquired by searching for the truth diligently thru all the means at hand, and, looking and honestly seeking, the human soul shall surely find him.

THE DUTY OF THE STATE IN EDUCATION

BY DR. EMERSON E. WHITE, COLUMBUS, O.

[ABSTRACT]

Childhood is a warfare. In the being of a child are two forces in conflict for rulership in its life. On one side are reason and conscience, the child's higher nature, the rightful ruler in its life. On the other is a gang of animal appetites, a horde of bandit propensities, eager to rule, and ready to barter earth or heaven to secure it. Not in the lion's lair are these passions one-half so fearful as lurk in the being of the most innocent child. The sweet babe of Askalon became the murderous Herod, and the gentle pupil of the wise Seneca became the cruel Nero whose word caused an empire to tremble.

On the issues of this conflict between the two natures of the child hang all the issues of its life. If the higher nature conquers, if reason and conscience win the throne, out of such a victory will come a life of honor and beneficence; but, if the lower nature gain dominion, manhood may be turned to shame and hopes to ashes.

What capabilities are the inheritance of a child! In its nature is a wealth of intellect and heart, inviting it to a life worthy of the gods; but all these divine capabilities may be buried in a napkin or bartered for a mess of pottage.

What possibilities of action and influence nestle in the being of a child! No one can look in the face of a pauper's child and possibly guess what is to be in its life. History is full of examples of high achievement by those who were born in extreme poverty and lowliness. [Joan of Arc and Lincoln were cited as illustrations.]

Out of the being of every child three voices plead for its control, nurture, education — its needs, its capabilities, its possibilities. Whose duty is it to hear this cry of childhood? It is the duty (1) of the father and the mother, who are God's vice-gerents on earth for this high duty; (2) of the community in which the child is born, either a blessing or a curse; and (3) of the state in which, as a citizen, he is to be an element of its weal or its woe. The property of the state is all under mortgage — and first mortgage, too — for the education of the children born into its liberty.

It is thus seen that under God three agencies stand by the cradle of every child — the family, the community, and the state; and these are joined in a sacred alliance to help the child's higher nature to victory in its life—to train the child for manhood and liberty. The church also stands there, with its divine commission to teach the gospel of life and hope.

We have thus stated, in a few brief sentences, the unanswerable argument for universal education in a free state; and yet, in the face of it and the grand array of historic facts that support it, the right of the state to educate is questioned, and even boldly denied. One party denies the right of the state to teach anything; affirming that this is the exclusive right and duty of the family. Another party, borrowing its ideas from the Tory aristocracy of England of the last century, denies its right to teach above the merest rudiments of knowledge — the three R's.

It must suffice to say, in passing, that there are but two logical positions respecting education by the state. One denies the right of the state to teach at all; the other affirms the right of the state to teach any branch of knowledge that will promote the public welfare. There is no middle ground on which logic can stand. By what argument can it be shown that the state has the right to teach one boy to measure a board or a pile of wood, but has not the right to teach another boy to survey a field or a railroad ? It is not possible to draw a line thru education and affirm the right of the state to teach up to this line, but deny its right to cross and teach on the other side. There is no such line in education.

The three great aristocracies of the world — the aristocracies of caste, of capital, and of culture — "the three big C's" — have united in a most paternal solicitude lest the "working people" be spoiled by overeducation. Much schooling, they assert, spoils the children of toil for their lot in life, fills them with vain ambitions, and makes them discontented with their lot. It is even asserted, in Bacon's language, that "the schools are filling the realm with idle, indigent, and wanton people."

The history of education affords a conclusive answer to these assertions, and, over against them, let us put the decisive facts of recent history. During the present century the nations have been to school, and important facts in the education of the people have been settled, not by assertion, but by national experience. Let us bring the nations into court and hear their testimony.

In the light of this history the question was asked : "Why should the state educate ?" In answer, the following propositions were stated and sustained by a wealth and cogency of historic facts :

1. The state should educate *as a means of military defense*—that it may be strong in war. The speaker cited as illustrations (*a*) the defeat of Prussia, at Jena, by Napoleon in 1806, followed by the infamous treaty of Tilsit; (*b*) the defeat of Austria by Prussia, at Sadowa, in 1866; and (*c*) the defeat of France by Germany in 1871. The compulsory school

systems of Prussia, Austria, and France are respectively the consequences of Jena, Sadowa, and Sedan. A most striking illustration is at our antipodes—the defeat of China by schooled Japan in 1894. It is the opinion of the highest naval authorities that victory in naval battles depends more on men than on ships and armaments, The now recognized superiority of the American marine is due to his intelligence and character. The American gunner puts his conscience into his shell. He shoots to hit the enemy, and not to vex the innocent sea.

2. The state should educate *as a means of industrial progress*—that its people may be rich. In support of this position the speaker laid down four propositions, supporting each by a wealth of argument and illustration:

(*a*) Education promotes industry and lessens idleness. It touches both of the great laws of wealth—supply and demand. It awakens desires, and, thru these, impels man to labor for their gratification. Nowhere on earth does a schooled people clothe itself in rags or live in hovels.

(*b*) Education makes labor more skillful and more productive. In proof were cited the results of the inquiry of Horace Mann in 1846 and United States Commissioner Eaton in 1870; the testimony of the great international expositions, special reference being made to the world's fair in London in 1851, the Paris exposition in 1867, and the Columbian exposition in Chicago in 1893. "The hand is another hand when guided by an intelligent mind."

(*c*) Education enriches industry with discoveries and inventions. The progress from the sickle to the cradle, and from the "muley cradle" to the reaper and binder, was cited as an illustration of the influence of invention on farming. The day of muscle in industry is passing; the day of mind has come. Thought in the brain of labor is the alchemy of industry.

(*d*) Education improves the condition of the laborer, morally, socially, and politically.

3. The state must educate *that civil liberty may endure.* A republic is an organized people. They constitute the state, and, in the end, the will of the people is law, whether that will, as Mann once said, "reads the moral code forward or backward;" and there is no appeal. It is idle to rely on what Matthew Arnold calls a "saving remnant." In a free state intelligence and virtue must rule, and, to this end, they must pervade all heads and all hearts. What is needed in a republic is a saving majority, and a big majority.

Civil liberty without intelligence and virtue in the people has ever been the sport of civil tempests. In his centennial address at Plymouth, in 1820, Daniel Webster laid down three conditions on which the perpetuity of the American republic depends—universal education, universal religious training, and the proper division of landed property. The same conditions are laid down by De Tocqueville and other writers on republican institutions. "In a republic," said Mann, "the ballot-box is the urn of fate, and intelligence must shake the bowl and virtue preside over the lot, or, in the end, all will be lost." In all the past, when civil liberty has been lost, she has been buried in the tomb of public intelligence and virtue.

The speaker then referred to the fact that at each of the last five presidential elections the ballot had been cast by more than a "round million" of men who could not read a word on the piece of paper which they deposited.

The supreme duty of the state is universal education. The school must be placed within easy reach of every child born into American citizenship, and, in some wise way, it must be seen that he goes to school. Whatever else may be done, this must not be left undone. The teacher must place his hands in blessing on the head of every child born under our flag.

In the American school the child must not only be taught branches of knowledge, but to love truth and honor and purity, and his neighbor as himself. What the republic demands of the school is not intelligence alone, but intelligence and virtue. The end and measure of the school is character—a noble manhood. What the country most needs is not better leeks and onions, but deliverance from this worse than Egyptian bondage to avarice, appetite, and lust, and in this final exodus of the race the Christian teacher is to be our Moses.

In the center of American civilization is a little child. Take wise and loving care of that child, and all human interests are secure. Neglect that child, and all human interests are in jeopardy.

"What constitutes a state?"

THE DEAF AND THEIR POSSIBILITIES

BY PRESIDENT E. M. GALLAUDET, COLLEGE FOR THE DEAF, WASHINGTON, D. C.

Mr. President, Ladies and Gentlemen:

I trust I may not be thought egotistical when I begin with a word as to my personal connection with the education of the deaf.

It has been my privilege to be associated with this class of persons for more than forty years as a teacher and as an observer. I have examined the methods pursued in more than two-score of the schools for the deaf in this country, and in a greater number of schools in thirteen of the countries of Europe. I have taken careful note of the results of every method which has been made use of in every place that could be reached by travel.

Within a year I have had unusual opportunities for meeting, in personal converse, large numbers of educated deaf persons, not now in school, in Italy, Switzerland, Austria, Germany, France, England, Scotland, and Ireland. From these persons, whose testimony was from their own experience, I was able to learn much of value as to the results and relative advantages of the different methods of education, and my intercourse with them was by means of a language more truly world-wide than Volapük will ever be—the natural, ideographic language of gestures; no doubt the oldest known to man, but whose antiquity is by no means a synonym of decrepitude, inexactness, or decay. For in the use of this unique means of expression mind comes into more direct contact with mind than when the barriers of arbitrary and artificial language are interposed.

Any endeavor to appreciate and understand the possibilities of the deaf must begin with an effort to comprehend—which is not an easy task—the state of mental blankness in which a child born deaf and remaining without education must necessarily continue.

The starting point, when the training of such a child is begun, is infinitely lower in the scale of mental development than that of a normal person. To such a child all the objects and living creatures around him are without names. For his own crude thoughts he has no means of verbal expression. All the phenomena and ministry of sound have no existence to him.

The high degree of intelligence, and even of social culture, which is possible to the unlettered who have all their faculties, growing out of that easy, personal intercourse which hearing and speech afford, can never be attained by a deaf-mute left to his own resources.

Some of you may remember Charles Dickens' description, in his *American Notes*, of the blind deaf-mute Laura Bridgman, in which he speaks of her, before education, "built up, as it were, in a marble cell. impervious to any ray of light or particle of sound, with her poor white hand peeping through a chink in the wall, beckoning to some good man for help, that an immortal soul might be awakened."

Only a little less pitiable in degree, and quite the same in kind, is the condition of the deaf-mute left without education.

And yet experience has proved that, when once the helping hand of the teacher is extended, the deaf-mute's possibilities for intellectual growth are not less than those of normal persons.

In the four-score schools of the United States upward of ten thousand deaf children receive the full equivalent of the common-school education, including industrial training. Many are given high-school courses of study, and a proportion greater than that in the community at large are acquiring a knowledge of the ancient and modern languages, the sciences, the higher mathematics, history, literature, economics, and philosophy, in the college which has been for many years liberally sustained for their exclusive benefit at the federal capital by the government of the United States.

In this college deaf-mutes have become fitted to be editors and publishers, to be clergymen, to enter the civil service of the government, to be teachers and heads of schools, to be architects and artists, to fill elective offices in the public service, to engage in scientific pursuits, to succeed in active business, to practice law, even before the supreme court of the United States, and to be postmasters by presidential appointment. None have as yet been elected as members of Congress, or to the Senate, but I have heard the opinion expressed that the transaction of public business might be expedited, under certain conditions, if a proportion of the federal legislators could be chosen from this class of persons.

It is possible to teach a child born deaf to speak well, and to understand the speech of others, by observing the motion of their lips. This has been done in many instances in many countries. But the conclusion often drawn from such successes, that all deaf children may do likewise, is not sustained by experience.

Success in teaching deaf-mutes to speak is a matter of gradation, and, in estimating the value of results, enthusiasm and bias on the part of the teacher often lead to serious error. A large proportion of deaf children, whose teachers assure them they have acquired the power of speech, and who can use their voices, such as they are, with considerable fluency, are conspicuous failures as speakers in the world at large.

The utterance of these, understood easily by teachers and intimate friends, is often so muffled or harsh, and so imperfect, as to repel strangers, putting the deaf person at a much greater disadvantage than if, remaining silent, he resorted to writing as a means of communication.

The testimony of the intelligent, educated deaf-mutes I met in Europe last year was unanimous and emphatic on this point, and they declared most earnestly that the practical value of speech, to many of their number, when they came to engage in their life work in the world, was greatly overestimated by their teachers.

The expression of this view was especially positive in Germany, where the oral method has prevailed exclusively, and where, quite recently, a petition, numerously signed by educated deaf persons, has been presented to the government, asking that the sign language be made use of in the schools of that country, and that instruction under the oral method be not continued with those whose success in speech is only partial.

Teachers of the deaf in Germany are coming to the support of these views as to methods, altho only a few have dared to express their opinions openly. But there is reason to believe that a revolution has begun that will, before long, bring German schools for the deaf into harmony with the great majority of the schools in America, where, happily, a combination of methods is effected, under which the capability of each pupil is carefully estimated, and that method employed which will be most helpful to the child.

There are teachers of the deaf in the United States who have urged, within the past few years, that the language of signs ought not to be used in teaching deaf-mutes, and in a few schools attempts have been made to carry out this idea.

It is, indeed, possible to teach deaf children without the use of the language of signs in the class-room or the public assembly. But the testimony of great numbers who have been so taught is that their intellectual development has been narrowed and retarded by the refusal, on the part of their teachers, to make use of that language which is theirs by nature.

My experience with the deaf and my lifelong familiarity with their peculiar language lead me to accept this testimony as the statement of a general truth, and to express the hope that the day is not distant when the natural language of the deaf will have its proper place in every school, as the German deaf-mutes demand, and as many German teachers recommend.

Did the limitations of the present hour permit, it would be interesting to discuss at some length the capabilities of that language of signs, but there is only time for me to call attention to the fact that to the totally deaf lip-reader the speech of others is nothing else than a series of silent signs. To the totally deaf the movements of the vocal organs are only signs for words, never the words themselves, so it appears that for the deaf the natural—indeed, the only practicable—substitute for the language of sound, even under the oral method, is one of signs, visible to the eye, understood by the mind only thru the power of vision. And when a teacher, prohibiting signs of the hand and arm, which are descriptive, often presenting graphic pictures of the ideas to be expressed, and which are used and loved by the deaf the world over, limits his pupils to the restricted, often minute, and always arbitrary signs made by the mouth in speaking, is he not, by a process neither wise nor kind, narrowing the range of the mental vision of his subject from the telescopic to the microscopic ?

The denial of the use of the language of signs to the deaf while in schools takes away one source of keen enjoyment and valuable instruction they can ill afford to lose, and which cannot be secured to them in any other way.

This is the giving of lectures and addresses to the whole body of pupils in a school, or a large assemblage of adults. We who hear know what pleasure comes from listening to an eloquent, earnest speaker ; how the attention is absorbed and the feelings are stirred.

There is but one way of imparting this pleasure to the deaf in equal force and measure as it comes to us thru sound. This is by employing the natural, God-given language of the deaf, developed as it has been in our country thru many years of cultivation and use.

In the college it has long been the custom to give the students lectures in this language. Not only is this done by the professors, who are naturally adepts in the art of gesturing, but frequently eminent men who know not the sign language address our students thru an interpreter.

Within a short time they have had the pleasure and profit of lectures from General Greely, President Whitman, and Senator Morgan, which would have been impossible had the rule of banishing the language of signs been adopted in the college.

I am aware that it is claimed for deaf lip-readers that they can attend church and public lectures and the theater, understanding what is said as well as those do who hear. That a few of the most expert can approximate to this, under conditions quite impossible to a considerable number assembled in one place, is not denied. But nothing is more certain than that it is impossible for any large proportion of, say, two hundred deaf persons assembled in one place to follow understandingly one who attempts to address them orally.

With the substitution of the manual alphabet for the language of signs, the conditions are, perhaps, somewhat improved, as compared with those just described. But the eye strain is so much greater, the radius of vision so much smaller, and the power of expression so much restricted and diminished that the advantage lies greatly with the employment of the language of signs.

Thinking that the question may arise in the minds of some, "Does the sign language give the deaf, when used in public addresses, all that speech affords to the hearing?" I will say that my experience and observation lead me to answer with a decided affirmative. On occasions almost without number it has been my privilege to interpret, thru signs to the deaf, addresses given in speech; I have addressed hundreds of assemblages of deaf persons in the college, in schools I have visited, and elsewhere, using signs for the original expression of thought; I have seen many more lectures and public debates given originally in signs; I have seen conventions of deaf-mutes in which no word was spoken, and yet all the forms of parliamentary proceedings were observed, and the most earnest, and even excited, discussions were carried on; I have seen the ordinances of religion administered, and the full services of the church rendered in signs; and all this with the assurance growing out of my own complete understanding of the language—a knowledge which dates from my earliest childhood—that for all the purposes above enumerated gestural expression is in no respect inferior, and is in many respects superior, to oral, verbal utterance as a means of communicating ideas.

Before turning to another subject, I wish to say to the friends of any deaf persons whose teachers, in their zeal to give them the power of speech, may have rejected the language of signs as a means of instruction, and may have advised their pupils never to learn nor to use it in a vain ambition to make them "just like hearing people," that by such a course they have subjected them to a lifelong deprivation which can hardly be measured; the cruelty of which remains in spite of the fact that it was intended as a kindness.

In closing this brief consideration of the deaf and their possibilities, time only remains to speak in some detail of the methods used in the education of this class of persons, and to show, if possible, which methods, or what combination of methods, deserve the favor and support of the community.

There are three quite distinct methods in general use at the present time: the manual, the oral, and the auricular, which I have named in the order of their adaptability. That is to say, all deaf-mutes can be educated by the manual method, less than all by the oral, and only a small proportion by the auricular.

The last named, as will be easily understood, is employed only with those who have more or less hearing. Hearing tubes and other appliances for helping defective audition are made use of. In the seating of a class, those with the most hearing are placed farthest from the teacher. Children who possess sufficient hearing to be educated under this method have either had the power of speech before becoming deaf, or acquire it easily thru the aid of their hearing.

Such children, after a reasonable term in school, cease to be deaf-mutes in any sense, and should be enumerated in the census as persons "hard of hearing."

Under the manual method no attempt is made to impart the power of speech to those who lack it, but thru the aid of the language of signs, the manual alphabet, and writing, the intelligence of the children is awakened and developed, and a full command of verbal language is given, the ability to use text-books is acquired, and the door is opened to as complete a grasp of the curriculum of school and college as is possible to children and youth in the possession of all their faculties.

All the deaf, without exception, may be educated by this method, the only limitations being their lack of purpose and industry, or of mental capacity.

There are teachers of the deaf who do not hesitate to claim that all the deaf may be educated under the oral method. From remarks made near the opening of this paper you will have understood that my experience makes it impossible for me to admit the justice of this claim.

No question connected with the education of the deaf has received more careful or prolonged investigation at my hands than this. And the reason why zealous and enthusiastic teachers are misled is not far to seek.

Repeatedly, in visiting oral schools and oral classes, I have asked that all the pupils in a class be allowed to read aloud to me from a book with which they were familiar, but of the contents of which I was ignorant.

Such tests have invariably disclosed the following conditions: Certain of the children I would understand fully, others only partially, and with quite a proportion not a single word that was uttered. At my report on these last the teacher would express great surprise, and say, "Why, I understood every word," quite oblivious of the fact that the daily intercourse of the class-room gave a meaning to what to a stranger was gibberish. The proportion of children, in an oral school where all classes of the deaf are received, who would be stamped as failures under such a simple test as I have described is by no means small. And to these must be added others whose failures would be less marked, but whose success would be so limited as to suggest plainly the inadequacy of the methods pursued.

In determining, then, the matter of methods, shall it be said that because only a small portion are capable of success under the auricular method, and a larger portion under the oral, these two methods should be abandoned and the manual alone employed, because under it alone all the deaf can be educated?

Surely this course would be far from wise; and happily a solution has been reached in the leading schools of our country which is at once scientific, practical, and in harmony with sound principles of pedagogy.

The capabilities of each child are carefully tested — often by prolonged trial — and that method applied which is suited to the peculiarities of each case.

If an amount of hearing is found above a certain minimum, the child is taught by the auricular method. If promising success in speech is gained, the oral method is chosen; and where such success is not attained, the manual method is resorted to. By this process, in a large school, the capacity and lack thereof of every child may be considered — and humanely met — and a system of education carried forward, broader than any single method, and infinitely more elastic.

This combination of methods is known in the terms of our professional vocabulary as the "combined system," and at this time nine-tenths of the deaf children of the country are being educated thereunder.

In the light of present experience, a school for the deaf which limits itself to the employment of a single method must be regarded as inadequately equipped for doing the work that may properly be demanded of it.

This is the severe but just criticism brought against the German schools, as a whole, by eight hundred of their graduates in their petition to the emperor for reform.

No success in individual cases, nor in schools of selected pupils; no enthusiasm of well-meaning teachers, nor of others less honest, should be allowed to mislead the public, as it has often done in this matter. Lest the language just used should seem to some unwarranted, and therefore unfair, I will give a recently published utterance from one of the most prominent instructors in Germany, Edward Walther, director of the Imperial Institution at Berlin.

Tho a supporter of the oral method, Mr. Walther makes no extravagant claims for its results, and has only words of condemnation for those who do.

"Since it is hardly possible," he says, "that they deceive themselves, their object must be to deceive others." In that deception he, as an honest man, will have no part. "We must openly and candidly confess," he continues, "that all we can do is imperfect work. What nature has lavishly bestowed on the hearing person we cannot give to the deaf-mute. We cannot bestow on him a power of speech which, in clearness, euphony, and extent, *approaches* that of hearing persons. We cannot give him a means of understanding the speech of others which is anything more than a meager substitute for hearing."

And this is from the highest possible authority among living German oralists.

The deaf are not of uniform and equal capacity. No hard and fast rule can be laid down under which they are all to be educated or fail of securing an education.

Each of the methods, once bitterly opposed, has its advantages and its superior merits for certain cases.

If the public will accept the judgment of the very large majority of experienced instructors in our country, as expressed in the policy of the schools in which nearly all the deaf children of the country are being educated at this time, there will soon be no single-method schools remaining to excite hopes that must be disappointed, wasting time in vain efforts to realize the unattainable. And it is no idle boast to say that the system prevailing generally in the schools of the United States for the deaf today gives far more satisfactory results, and affords the pupils more advanced and better training, than are secured in any other country.

EDUCATION AND GOLD IN ALASKA

BY JOHN EATON, EX-UNITED STATES COMMISSIONER OF EDUCATION, WASHINGTON, D. C.

The story of the relation of gold to education in Alaska is full of lessons for the statesman and citizen. We cherish our free institutions;

we prize them so highly that we are ready to lay down our lives in their defense; we are all saying on the Fourth of July and other occasions how glorious they are, and how necessary education is to their preservation; indeed, education is so essential that we boast of it by no means the least. We are ready to exclaim: "Are we dogs, that we should sell our freedom or our education upon which that freedom depends?" What are the facts with reference to Alaska? It should be recalled that, when we received that vast domain from Russia, we put it in a solemn contract that Russian citizens who came with the country should have the full enjoyment of our free institutions, and we claim none of them is more important than our education. Moreover, we promised proper treatment of all other persons. Let us see. From the purchase of Alaska at a cost of $7,200,000 in 1867 until the rush for gold there thirty years later, 1897, it has been, in the main, disparagingly characterized as Mr. Seward's iceberg; a large one, indeed, containing 580,107 square miles, or nearly one-sixth as much as that of the whole of the remainder of the United States, measuring, on direct lines, 1,100 miles north and south, and 800 east and west, with a coast line, as estimated, of 18,211 miles, with islands having of themselves an area of 31,205 square miles. The Aleutian islands extend 1,500 miles into the Pacific ocean, or to a meridian considerably west of Hawaii; many of these islands being mountainous; one of them, Unimak, rising to the height of 8,955 feet. Along the southeast coast there is the archipelago, with 1,100 islands. This southeastern section is heavily timbered, grows many plants useful in human economy, especially hardy grasses, roots, and berries, and has a large rainfall; while on the Yukon there is not more than thirteen inches, at Sitka the rainfall varies from sixty to ninety inches a year, and there is an average temperature in winter of thirty-one degrees, in summer of fifty-five degrees; on the Yukon the thermometer rises to 112 degrees in the summer, and goes down to sixty-eight below zero in the winter. This region is especially rich in fisheries, lumber, and minerals; while north of the valley of the Yukon the region is little explored, and is mainly regarded as a great expanse of ice and snow.

In a large portion of the country the usual conditions prevail common to arctic regions. The depth to which the earth is frozen is not known. Indeed, on the Yukon, where much of the mining is done, and where the surface thaws out at such a depth under extreme summer heat that potatoes, turnips, and cabbages are grown with success, the earth is known to be frozen to the depth of thirty or forty feet. When the country was transferred to our flag, the Russians, who for a century had been busy cultivating trade with the natives, establishing here and there a Greek church, and making very limited efforts in the way of education, began to withdraw. Americans slowly took their places. An American commercial company soon contracted with the United States for the right to kill seals on the Pribolof islands, in a few years paying into the treasury all that Alaska had cost. This company carefully regarded the terms of this contract, one of which was the supply of a school on each of these barren islands for the natives.

The population was variously reported from 30,000 to 70,000. No exact census has yet been taken. In that of 1890 a total population was reported of 32,052, of whom 4,298 were whites, 1,823 mixed, 23,531 Indians, and 2,288 Mongolians. A more common division of the population is white, Indian, and Eskimo. Professor W. H. Dall, the best authority on the subject, speaks of the natives as (1) Indians; these he divides into two classes: (*a*) the Kolosh, or bad Indians, inhabiting the region about Sitka; (*b*) those of the Chippewayan type, found north as far as the Arctic circle. (2) The Eskimos; these he divided also into two classes: (*a*) the Inuits, who occupy a very large portion of the coast, and who compare favorably with the natives of Greenland; (*b*) the Aleuts, occupying the Aleutian islands. These he describes as making good mechanics, carvers, and domestic servants, and mentions one named Caden, at Sitka in 1848, as drawing and engraving in copper some of the best charts of Alaska. The Greek church had established numerous chapels and baptized many natives, but this had produced little effect on the character of the people. Those who had come in contact with the traders had been greatly injured by the vices which they had thereby acquired.

After our occupation of the country a small military force was stationed there for a short time, but the natives were so peaceful it was withdrawn, and all the indications of the authority of the United States were the presence of a collector of revenue, an occasional visit of the revenue marine, and the mail.

The educators of the country may congratulate themselves that after 1870 they did not share in this neglect without protest (the Bureau of Education was established in 1867 by their urgency; the eminent educator, Hon. E. E. White, who speaks this evening from another platform, being chairman of the committee for the expression of their demand). That bureau being the medium of their opinions, in 1870 its report called attention to this neglect. All the great departments and other bureaus were silent. Year after year the annual report on education told something of the facts. In one it declared that "Alaska lies entirely outside of all organized efforts for education, and presents the singular fact of being an integral part of the best nation in the world, and yet without the least provision to save its children from growing up in the grossest ignorance and barbarism;" and another, quoting Professor Dall, said: "There is no civil government; no redress for injury; no protection for whites or natives; no legal authority for settlement; no punishment for crime." During this period the bureau was also specially indebted for information to Rev. W. H. Atkinson, D.D., of Portland, Ore. It may be mentioned that a gentleman called and warned the bureau to stop publishing about Alaska, threatening that, if it continued, its appropriation would be cut off. At Sitka, a case of disorder occurring in the absence of the revenue cutter doing police duty on the coast, the people, in a moment of fear, appealed for help to the officer of an English vessel that happened to be lying in the harbor. This humiliating incident was sufficient to attract the attention of some who had been indifferent.

It is true that the Forty-first Congress appropriated $100,000 for industrial and other schools among Indian tribes not otherwise provided for. It was thought by the Board of Indian Commissioners, whose attention had been specially called to the neglected condition of the natives of Alaska, that at least a portion of this sum might be expended for the establishment of schools among them; but in considering the proposition it was feared that doing this would establish in Alaska the Indian policy. Here was a peculiar difficulty. The natives of Alaska gave the government no trouble and occasioned no expense. The introduction of the Indian policy would lead to the establishment of reservations, the consequent idleness, lack of self-respect, demoralization, and ultimate disturbances and conflicts, up to that date so common among our untaught and abused aborigines. The Bureau of Education, therefore, did its utmost to introduce education, which was all the aid the people needed, and to co-operate with the purpose to prevent the subjection of the Alaskans to the fatal evils of the tribal and reservation policy, and the $100,000 were wasted, as were millions annually, either feeding or fighting Indians, until reforms were introduced by General Grant. In the summer of 1877 Rev. Sheldon Jackson, D.D., who had for nearly twenty years been an untiring synodical missionary of the Presbyterian church, establishing schools and churches in the vast region west of the Mississippi between Canada and Mexico, visited Alaska, and placed Mrs. A. R. McFarland in charge of a school commenced by the natives themselves at Fort Wrangell, and proposed to locate Mr. J. G. Brady the next year at Sitka. From this time forward Dr. Jackson became the most efficient coadjutor of the bureau in the interest of Alaska. In his statement to the Commissioner of Education he called attention to the fact that Alaskans are far in advance of the blanketed Indians of Dakota — in the north residing in permanent underground houses, in the south having large plank houses above ground and adopting in some measure European dress. He emphasized specially several facts: first, parents selling their daughters for purposes of prostitution; second, witchcraft, in the practice of which many persons were tortured to death; third, neither law nor courts had extended to Alaska; fourth, ignorant and degraded as the people are, they are self-supporting, and need only schools and guidance in improving their industries and employing the arts and customs of civilized life; fifth, there is no necessity for recognizing tribal relations, which have been so injurious among our Indians. By the aid of the bureau Dr. Jackson was able to bring his views to the attention of educators. He addressed educational conventions; one of those, on education in Alaska, contained in a circular of the bureau, was distributed in answer to demands to the number of 80,000 copies. Educators and other intelligent citizens petitioned and conventions memorialized Congress and seconded his efforts. He called the attention of the churches of the different Christian denominations, Catholic and Protestant, to the situation, and suggested their dividing the territory so as to supply schools as widely as possible without interfering with each other's work. They responded heartily. Every effort thus made revealed the needs of the people, and brought evidence of their desire and capacity for education. In his effort to awaken interest and secure action Dr. Jackson went before the committees of the Forty-sixth, Forty-seventh, and Forty-eighth Congresses. The awakened interest in Alaska was declared due to him more than to any other man. The secretary of the interior and the president indorsed the urgency of the Commissioner of Education, who added to his reports personal appeals to congressmen; but no action was taken by the government until Hon. Benjamin Harrison became United States senator and took his place in the committee on territories, and the facts were called to his attention. He could not be bribed, nor deceived, nor the edge of his apprehension be turned. It was objected the natives were taking care of themselves and needed no legislation. There were those who did not see how laws could be enacted or their administration carried on in a territory geographically separated from us. In their minds there were grave constitutional difficulties. Legislation would inaugurate a new policy threatening the destruction of our cherished liberties. A carefully prepared bill for the extension of law over Alaska was presented, and Senator Harrison did not abate his support until it became a law; and thus, after seventeen years of neglect, the income from the rental of the seal islands having more than paid the purchase money, Alaska was organized into a district. The opposition defeated some of the most beneficent features of the bill, but it provided for schools—$25,000 was appropriated for their establishment, and the Commissioner of Education was ordered to organize them. In April, 1885, with the approval of the secretary of the interior, he appointed Dr. Sheldon Jackson general agent of education, who at once proceeded to employ teachers, erect buildings, and furnish supplies. Schools were opened at the most important and accessible points — some of them so far away that they can be communicated with only once a year. What the natives have of advantage in their hereditary adaptation to climate and in their rude skill has a value. Careful instructions were issued to the teachers, in teaching letters and industry, to take special care to guide the people in taking on the new life so as to lose no advantage from the past. With an agent less untiring, resourceful, courageous, and faithful, the schools might have halted; but they are today going bravely on under the wise direction of our able and efficient Commissioner, overcoming every obstacle but the lack of appropriations. The last report gives twenty day schools, twenty-three teachers, and 1,267 pupils in government schools, and about as many in attendance in mission schools, or in all some 2,500 pupils.

The natives, in the main, live in villages in the winter and scatter out for fishing and hunting in the summer. As yet there has not been money to try the adaptation to their necessities of ambulatory schools, common in the north of Europe. It would be instructive, in the diverse conditions under which the schools are conducted, to visit the teachers in these remote regions, sometimes from one year's end to the other without the sight of another white person, in the midst of their little communities. Their houses and the dress of teachers and pupils are adapted to the rigor of the climate. After the autumn begins, the cold grows greater and the days grow shorter, according to the latitude, until the sun is seen but little, or not at all, or the reverse, as the summer draws near. Not a little is done by private aid to increase the facilities furnished by the government appropriations. Already Christian family life and the industries of civilizations are having their influence. The instruction of the natives in English has enabled them to be more useful in all their intercourse with the whites, whether in fishing, packing, mining, or trading, and more wisely to adapt themselves to all new conditions, as is confirmed by much interesting testimony. Hon. J. G. Brady, the excellent governor, in his report declares: "It is safe to say that no work under the care of any department of the government has been more fruitful of good results than the labor of this bureau in Alaska."

The introduction and conduct of schools in Alaska have not been without peril to agents of education and to the teachers. Mr. C. H. Edwards was killed by smugglers in 1892; Mr. H. R. Thornton was killed by Eskimo desperadoes in 1893; John Torgerson was drowned in 1885, S. A. Saxman and Louis Paul in 1886; Mr. and Mrs. V. C. Gamble and Mr. and Mrs. E. L. Weber were lost at sea in 1898.

Who has not heard of the community on Annette island, in southeast Alaska, that has accepted Christian civilization under the guidance of William Duncan, an English layman? They built their first village in Canada, but, Canadian ecclesiastical and civil authorities interfering with their plans, they sought a home under the American flag, and Congress granted them Annette island, when they left behind them houses and all their possessions but what they could carry in their hands. Fortunately, Hon. H. R. N. Dawson, then Commissioner of Education, on his visit to Alaska was present to welcome them at their landing on American soil and rearing of the American flag. By their industry, they now have a village of one thousand souls, living apart in families in separate houses of their own building, with profitable industries, townhouse, schoolhouse, and church. Their village has a water supply piped to it from a distant height; they have a system of police and courts of their own; no intoxicating liquors are allowed, and they furnish a conspicuous example of the possibilities of the Indian when separated from the vices of civilization and controlled by the principles of Christianity. The only aid they have received from our government is the support of their school furnished by the Commissioner of Education.

In 1890 Dr. Jackson, in his visit to arctic Alaska for the establishment of schools, found the Eskimo population slowly dying off with starvation. The natives, without the necessary forethought in the use of new implements of fishing and hunting, and other new conditions, had too rapidly killed off their food supply by land and water; restocking either land or water was out of the question. Siberians, just across the way, found an unfailing food supply in herds of domestic reindeer. Alaska had an abundance of the moss, their proper food. Dr. Jackson saw the solution of the situation in the education of Alaskans in the raising, management, and use of domestic reindeer. He appealed to Congress, but there was no response. Many asked: "What have reindeer to do with education?" Several friendly editors aided him in securing $2,146 for the experiment. Immediately there were those who saw insurmountable difficulties. Siberians were declared to be extremely ignorant and superstitious, and would not sell the reindeer on whom they were so dependent. It was declared interpreters could not be had; besides, the deer were very sensitive and would die rather than be transported to Alaska. The whole proceeding was under the direction of the Commissioner of Education. The secretary of the treasury, in sympathy with the movement, instructed Captain Healy of the "Bear," the revenue cutter charged with policing that section, to co-operate. Appropriate articles to barter for the deer were procured; Siberia was visited; there was no difficulty in purchasing the reindeer or in their transportation; and, there being lack of money for their herding during the approaching winter, the deer were landed on Amaknaks island, in the harbor of Unalaska, and left to take care of themselves. Dr. Jackson, returning, by the direction of the Commissioner of Education, with the "Bear" in the spring, found them alive and thrifty. Hon. Henry M. Teller and others took special interest in these efforts. The success of the experiment was so complete that a small appropriation was made by Congress, and in 1892 171 reindeer were purchased and landed at Port Clarence, and the training of the natives in their raising, management, and use commenced. But the Siberians employed were extremely ignorant; better teachers were needed. These were abundant among the Laplanders in northern Europe, where the raising of reindeer is as well understood as the raising of cattle and sheep among Americans; but there were no public funds for the emergency. Dr. Jackson advanced the necessary money. Mr. William A. Kjelmann, who had immigrated to Madison, Wis., and was a master of the business, was employed as agent to visit Norway and secure herders, and from that day to this the enterprise has gone successfully forward under the direction of the Commissioner of Education, illustrating at every step its importance in the instruction of Eskimos in the new industries necessary to their existence. They easily learn all that is required of herders, and the reindeer's skins and entrails furnish them clothing; the meat and milk, food; the horns and bones, implements, and the trained deer, the best means of transportation.

The deer at stations and schools, according to the last report, had increased to the number of 1,466; by a wise distribution of schools, as the natives are educated to be herders, and to families, as they are able to earn them, they will soon furnish the food supply needed for the new order of life.

Dogs, much used for traveling by explorers, must expend much of their strength in carrying their supply of food; whereas the deer are not only better adapted to the climate, but have no need to carry food, as they find it in the moss where they go. Thus the deer will soon take the place the horse occupies with us in traveling, freighting, and carrying the mail. In this way education may be expected to supply the food and clothing needful for the support of the people, and the means of transportation which will bring the most remote arctic regions into communication with the world.

By degrees, in the interest of trade, exploration, and science, the revenue service and mails have been extended, and different departments and bureaus have become active in finding out and reporting what there is in Alaska, and furnishing a large amount of literature giving information in regard to its harbors, rivers, and fish; its climate, soil, forests, and minerals; indeed, all conditions of interest to the public. But the rush for gold in the last eighteen months has done more than all else to make the names of its harbors, rivers, passes, household words the world over. Gold there has been known to the natives time without date, and for years to traders and missionaries. Placer mining for several years has been prosecuted with success, while on Douglass island, opposite Sitka, stamp-mills among the largest in the world have been turning out their millions. The great yield from placer mining on the Klondike, over the line in Canada, waked up adventurers in every quarter. Gold dust is found in the bed of almost every stream, pointing to large deposits in the mountains. Explorations do not warrant the fixing of the limits of this supply. Should $20,000,000, as estimated, be brought out this season, this generation will not see the supply exhausted. Moreover, the coal and other sources of wealth will awaken new industries; the conditions of permanent settlement will be devised. It remains to be seen whether the rush for that section, united with the wisdom which has so far directed education, will secure the needed appropriation for schools and the legislation required for the proper protection to persons and property.

It is well known that we all have great satisfaction in the improvements in our Indian service, and have only words of commendation for the officers in charge. But you will not expect me to dismiss this subject without pointing to the results of the policy of introducing education for Alaskans and opposing the introduction of our so-called Indian policy. Our Indians number, approximately, 300,000. For the administration of their affairs there are still required a separate bureau, and a large corps of clerks and other officers, and a total appropriation of $7,189,486.79, of which, under the improved policy, we are happy to say, $2,517,265 is for schools. For Alaska an outline or skeleton of a government is maintained for whites and natives at moderate cost—I have not the exact figures; but the annual appropriations to be expended under the Bureau of Education in Alaska for schools were $30,000; for the introduction of reindeer, $12,500, or a total of $42,500. This was administered by the Commissioner of Education, with the addition to his office of only Dr. Sheldon Jackon, general agent of education, and Mr. William Hamilton, the assistant; and this, it should be remembered, includes schools for whites as well as the natives. I need not extend the comparison; the difference between the two policies is sufficiently apparent.

The facts connected with the story of education and gold in Alaska leave no doubt that legislation and administration by the United States can be made effective in territory separated from them geographically, or that the Bureau of Education is the efficient agency for the administration of education in those remote regions where the population is not prepared to direct its own education. They emphasize the fact that the interest of the teacher should not be confined to the instruction of the young minds before him in the schoolroom in the three R's, but that his thoughts should go out to the duties of the citizen and include not a little of statesmanship. His intelligence increases his responsibility for the things beyond, and he should give the public the benefit of his larger patriotic apprehensions, and these need not in any sense be partisan. The united judgment of the 300,000 and more teachers in our land need not be in vain, and should be voiced in the support of schools in the remotest hamlets of our vast domain. Had the wisdom of their experience been earlier applied to the education of the Indian, how much sooner our honor would have taken the place of our shame! Slowly we have come to understand the methods of elevating degraded races and submerged populations.

The Bureau of Education, focusing the experience in education not only of America, but of the world, and according to its means distributing it for the benefit of the remotest and humblest efforts of all teachers, should have their united, vigilant, and hearty support. Today their immediate attention is demanded to the supply by the government of a home for its library, museum, and the prosecution of its work now conducted in inadequate and inappropriate quarters, but conducted so faithfully and efficiently by Hon. W. T. Harris, our practical and philosophical Commissioner.

Neither the search for gold nor the profits of trade primarily prepared the Hawaiian islands to come to us with ideas, customs, and institutions so in accord with our own as to shock neither themselves nor us; but education, Christian education, which led them forward in that course of civilization which enables them to report an attendance upon schools of 96.20 per cent. of those who are between the ages of six and fifteen. No language but English is now taught in public schools. The air is full of promises of our future. If our responsibility for other and less intelligent people is to be increased, let us make haste to turn into intelligent and virtuous citizens the millions of our illiterates who share equally with the most intelligent the suffrage upon which depend the conduct of our home affairs, the preservation of our free institutions. If American citizenship fails, then we shall invoke in vain the patriotism and heroism of our noble navy and army just now commanding the deserved applause of the waiting world.

LESSONS FROM AMERICAN EDUCATIONAL HISTORY

BY REV. A. D. MAYO, LL.D., BOSTON, MASS.

A careful study of the educational history of the American people, from the earliest colonial period until the present year, in connection with its environment in the origin and religious, social, industrial, and political characteristics of the different elements of our cosmopolitan population, will reveal several very distinct conclusions, which have not attracted the attention of our historical writers as often as their great importance demands.

1. The American common school is the most original and characteristic development of our American civilization. It was, indeed, the first attempt on record of a people to educate itself toward a republican order of society and government. The people of the colonies of Massachusetts bay, Connecticut, and New Haven struck the keynote of American civilization in the fundamental idea of a primary and supreme personal allegiance to Almighty God and obedience to his law which underlay every obligation to king, priest, and social order; the higher law which super-

sedes every statute and order of affairs that stands between man and his maker. In that rock-bound, barren, and unlovely soil of the New England theocracy was rooted the mighty tree of liberty that was "for the healing of the nations." The church and the school over which they had supreme control, and, as far as possible, the unique state which they built in the wilderness, were the direct creation of the responsible people; established, supported, and administered by themselves, in conformity with what they understood to be the will of the Most High.

This idea was the most valuable contribution of New England to the national life. For this reason the people of these colonies, not being distracted by the contentions of a cosmopolitan population and conflicting religious sects, were able to keep on the ground the colonial form of the common school during the 150 years from their settlement till the foundation of the union. As their population became more varied and divided into the various religious sects, the same fundamental idea enabled them to meet and dispose of the successive questions that came up in the administration of public education during the first half century of the national life, until the period of the great revival and reorganization of the American common school, from 1830 to 1860. During these momentous years, under the leadership of Horace Mann, Henry Barnard, and a group of coworkers only less able and devoted, the original common school of New England was established, essentially in its present form, in every northern state of the union, from the country district school to the state university. Since the close of the Civil War the American system has been established in every state of the South and every territory of the union.

The soul of this vast and beneficient organization is the idea that the responsible people of a state have the right, and are bound by the obligation, to educate the coming generation for the American citizenship that is the world's highest position and holds within itself the reserved authority to do any and every thing which the whole responsible people, acting thru a flexible majority that involves the possibility of all needful expansion and reform, may determine as in accord with the law of God and the providential order of human society.

2. The American common school, as now established, has been built up by the whole people of the United States, under the leadership of the educational public of every state. That educational public is formed by the union and co-operation of all sorts and conditions of people who believe in the fundamental American idea of universal education and propose to organize that idea into the innermost life of the republic. In doing this it has used, and still uses, the professional educators of various degrees, the clergy and the church, the politicians and statesmen and the great political parties, the press and literature, the accumulated wealth of the nation, and all the agencies of civic and social reform in manners

and morals. But it has not been indebted to any one of these agencies and institutions for its great achievement. Indeed, at different stages of the development of the common school, all these powerful agencies and institutions have been encountered in opposition. But each has been overcome, reconciled, or set aside, in the irresistible march of the people to the final victory for the children.

One of the most illuminating illustrations of this fact has been the history of the Peabody Educational Fund, well named by its giver, George Peabody, "a gift to the suffering South for the good of the union." George Peabody was himself the product of the district common school of New England, in the early years of the republic. The president of the board of management, Hon. Robert C. Winthrop, as chairman of the joint committee on education in the Massachusetts legislature of 1837, drafted the law that established the state board of education, of which Horace Mann was the first secretary. As president of the Peabody board, Mr. Winthrop called Dr. Barnas Sears, the second secretary of the Massachusetts board of education and immediate successor of Horace Mann, and Dr. J. L. M. Curry, a member of the legislative committee that drafted the first law establishing a common-school system in the state of Alabama, in succession, to the general agency of the board; and Dr. Eben Stearns, principal of the first American state normal school, and Dr. William H. Payne, professor of pedagogics in the State University of Michigan, to the presidency of the Peabody Normal College in Nashville, Tenn. Of the gentlemen who, at different times during the past thirty years, have served as members of the Board of Peabody Directors — the most distinguished body of men that ever took counsel together concerning the education of 20,000,000 people — only one member, save the two agents and two presidents of the Peabody Normal College, has been a professional educator — President Daniel C. Gilman of Johns Hopkins University, himself trained in the administration of the common schools of Connecticut. No body of professional educators representing all sections of the country in 1867 could have arrived at any practical agreement for the disposal of this great gift of $2,000,000. But this group of men, representing the highest ability and experience in public affairs, in accordance with the feeling of George Peabody, under the leadership of Robert C. Winthrop, General Ulysses S. Grant, and Barnas Sears, came to the unanimous decision to use the fund for the first establishment of the American common school, in its completeness, in the sixteen states where it could never have been established for all orders of people during the years before. Never since the world was made has $2,000,000, the income of the Peabody Fund in thirty years, been so wisely applied, with such abundant results. The board has done wisely in not distributing the original fund; and it will score another success in educational statesmanship by inaugurating a movement to add another million in honor of Robert C. Winthrop, chief among the educational statesmen of the reconstructed republic.

3. The American common school has grown, from the beginning, by the acceptance, adaptation, and assimilation to itself of many valuable elements of good school-keeping from all ages and every land. But it has never permanently adopted or retained any element that conflicted with its own fundamental idea. It has steadily outgrown the European educational ideas and habits brought to the country by the successive groups of original colonists and later immigrants from all quarters of the world. And whatever innovations may have been attempted by individuals or parties of scholars, educators, ecclesiastics, public reformers, or publicists, who, from time to time; have attempted to become its leaders, the people, as fast as they have become really assimilated to the national order of society and government, have refused to follow any anti-American leadership, and, from their own ranks, have elected guides and administrators, under whose direction they have fallen into line with the American idea of universal education.

This is one of the most significant lessons of the educational history of the United States—the wonderful insight and pertinacity with which the people of every American state have worked upward toward the American idea of the common school, often thru conflicts and complications that threatened its destruction, to its final assimilation to the innermost life of the commonwealth. The record of the development of the common school in the state of Louisiana is, in itself, one of the thrilling historical romances of this, the romance land of the republic. At the organization of the state the idea of universal education was outlined by the state administration in a way more comprehensive than had been formulated in any American commonwealth. From that day, ninety years ago, till the present year the educational public of the state has been working toward its fulfillment, against what has often appeared to be insurmountable obstacles—obstinate differences of race and religion in its white, with a numerical superiority of its colored, population. But, a generation ago, the school statute declared that, except where it was an actual impossibility, public instruction should be in the English language, and that no common-school funds should be appropriated to private and ecclesiastical parochial schools. A true record of the common school in the city of New Orleans would be one of the most interesting historical documents, not only for home use, but for every metropolis in Christendom.

So will it be to the end. Our young scholars are every year coming back to us from abroad, filled with enthusiasm for some excellent feature of educational method or administration, or some philosophy of human nature or social evolution, announced as an absolutely new departure in our national school life. But, in due time, the "fad" subsides, all that is in the theory conflicting with the ideas and ideals of our republican order of society and government goes to its own place, and whatever is good for us is absorbed into the life-blood, bone, and gristle of the American common school.

4. In education, as in all else relating to the organization of society and government, the people of the United States, in building for the children, have reversed the old-world dogma, which asserts that a people is educated from the university downward, by proving that our own people has been educated from the elementary school upward. Of course, in a general sense, all inspiration toward an uplift in human affairs begins in the new light of the thinker or the vision of the saint. But in a work like the training of such a people as ours in the supreme art of living and "working together for good" in the direction of self-government, the "sober second thought" of the many not only supplements but supplies the materials of thought and the inspirations of conscience to the leaders of men. Certain it is that the American system of universal education, while greatly aided in its development by the leadership of the educated classes, has fought its way up to its present position often thru a hand-to-hand conflict with the old-time college and secondary academy during the past 200 years. Today the denominational system of the secondary and higher schooling of our people, altho still assuming the superior title of "Christian," as opposed to "secular," education, is able to retain its prestige largely as it conforms to and co-operates with the people's common school.

All the great American universities have emerged upon their final upland career of prosperity by the gradual adoption of methods of discipline and instruction, including the entire spirit of their administration, which, for generations, were repudiated, or appeared in only a few of the more progressive institutions. The state university of today is as certainly the outgrowth and culmination of the people's common school as the magnificent orange groves of California are the offspring of the seed planted in friendly soil.

5. Finally, the American people, in the development of the American common school, have solved what has been called the religious question, not only for the schooling of the children, but the entire administration in every department of governmental activity. The separation of state and church at the beginning of the national life was at the demand of a people educated thru 150 tremendous years in the great university of American colonial society. At the beginning every group of European immigrants brought over the European system of what is now known as the church parochial school of their own country. The obstinacy with which this idea was held by the different ecclesiastical bodies prevented the establishment of any effective system of general instruction for half a century in several of the original Atlantic northern, and was a decisive obstacle

to the introduction of the common school thru the entire southern, states. The final emancipation of the common school from ecclesiastical control was wrought out by the people under the guidance of a masterly educational statesmanship. And, in doing this, it has avoided, at once, the ecclesiastical, reactionary policy of England and the extreme secularism of France.

The educational public of our country has solved this distracting question by showing that the new education in its American form — thru its fundamental idea of human nature, as revealed in the child; its expansive ideal of the possibilities of human culture; its spirit of benevolent discipline; its natural method of instruction; its invitation of woman to every opportunity as student, teacher, and administrator in the common school; and in its broad and profound conception of the manhood and womanhood essential to good American citizenship — is, in fact, the last and highest incarnation and organization of the absolute religion taught and lived by the world's great Teacher, as far as it relates to the entire realm of American public affairs. And this idea, never so completely apprehended and applied as in our own country, will be one of our most important contributions to the long-delayed, but inevitable and final, Christianization of Christendom.

THE DUTIES AND PRIVILEGES OF THE SUPERVISOR

BY MISS SARAH LOUISE ARNOLD, SUPERVISOR OF SCHOOLS, BOSTON, MASS.

The supervisor is an ill-named functionary, and it is due to his title that he fails to be properly appreciated. Under different names, in various places, he strives to do the work required of him. Director, inspector, head teacher, supervisor, assistant superintendent he may be. Sometimes he is all these and more, under the name of superintendent.

The common interpretation of his responsibilities is plainly indicated by his titles. He is to direct the work of the schools, to inspect them, to lead the teachers, to assist the superintendent, as directed by him. Free translation of these officers presents him as a formidable creature, who should be pictured as Argus-eyed and many-tongued, well supplied, furthermore, with scepters and rods.

But he is no such ogre. He has but one function, to help his fellows. He is set in his place for that purpose alone. Had he a "given name," it should be Moses, for he is commanded to lead his people into the promised land. Pictured, he should be placed at the head of a troop of children, who, trustful and confiding, walk with their teachers hand in hand.

For the statement of his duties we have not far to seek. They are stamped upon the statute books of the school committee in cold lead: "He is to visit the schools as often as practicable." He is to "direct the instruction." He is "to report to the superintendent or committee his estimate of the teachers." It is our province this morning to consider these duties and the manner in which they are fulfilled.

He "visits the schools as often as practicable." And for what? Not as a spy, to discover failings. That were an irksome task, foreboding no warm reception, and ill repaid. His time can be put to better use.

The legend runs that in certain schools of a certain city the teachers send from room to room some flag of warning when the supervisor is in the building. "Miss Smith," says a little boy who innocently bears the message, "Miss Brown says it is sixty-eight by her thermometer." Then the word flies to other rooms: "Shut your door! Get your room in order! Make ready for your best lesson! Supervisor is in the building." The tale, if true, is a sad commentary upon something, somebody.

Why should not the supervisor himself send word the day or week before: "I hope to visit your building next Thursday. Show me the work you most want me to see"? The record of the race horse is reckoned on the fastest mile; of the ship, on the fastest sailing. To brute beast, to the creature of wood and steel, we accord fair play. Why not to a teacher?

And here is the curious part of it (such is human nature, teacher nature) that, if one greets the teacher with, "Good morning, Miss Smith; what do you and the children want me to see this morning?" not only will the best bubble forth as joyously as the clear water from a spring on a fresh May morning, but the ill, too, will follow after. The teacher, justified by recognition of her good deeds and confident of the friendliness of her visitor, says frankly: "That is my best division; the others would not do as well." Or: "They do this well; they would fail in that. I wonder if you could suggest anything to help me there." So help is made possible and the visit counts for good. The supervisor fulfills his mission.

But note, the revelation comes only with confidence, because the teacher judges the supervisor to be her friend. Not as an inspector, a judge, a police officer, could he see her best work. It is only in the sun of confidence that our best effort flowers. No free and confident work can be done in the atmosphere of fear. The weaker, the more fearful the teacher, the poorer will her work appear under criticism.

Therefore I fancy the wise supervisor, in making his visits, withholds criticism until his teachers know and trust him, gives every opportunity for the exhibition of the best and strongest work, speaks the word of approval when it is deserved, and, by his sympathetic comment, assures the teacher of his co-operation with her in her work. Such visits are profitable ones, to teacher and supervisor alike. He sees the best, is encouraged and taught by it, and may make his experience bear fruit for other teachers if he will. The teacher, recognizing a friend in the dreaded official, forgets her reserve and her fears, loses the personal sense of hurt under criticism, and readily welcomes suggestions made for the good of the common cause.

By means of such visits the supervisor and teacher become acquainted with each other. Each is known to the other as a human being, an individual, aside from class marks. Now is the ground prepared for the next sowing, in pursuance of the injunction of the school committee: "He shall further the instruction in accordance with the course of study." And now the teacher takes her place as a member of the *community* of teachers—at the teachers' meeting, where, I may say, the supervisor's best and most effective work is done. If common standards of instruction are to be upheld, there must be meetings of grades, meetings of the entire body of teachers, meetings of districts, meetings of the teachers of subjects. Each sort has its advantages. It is good for all the teachers to meet together at intervals; it strengthens the spirit of fellowship. Grade meetings are necessary for detailed study and direction. District meetings afford opportunity for the discussion of *district* conditions—other than general—environment and its effect upon the children. Teachers of subjects discuss courses of study and specialties of their own, with their peculiar problems. All of these should the supervisor be fitted to organize and direct effectively. But all these are "called," not necessarily "chosen."

The *voluntary* meeting is by far the most helpful, the most satisfactory. At the call of the supervisor, which reads, "Whosoever will, let him come," assemble the teachers who recognize a higher than their present attainment, and desire the fruits of conference with their peers. At these meetings, whose subjects are appointed beforehand, teachers compare notes of experience, question, comment, consult. Types of work are shown, outlines are discussed, and the work of the day is interpreted in the light of experience. Young teachers drink in the words of the older and stronger ones, who describe what they have found good. This experiment, which seemed in the beginning doubtful, has been proven, accepted, is no longer an experiment. That practice to which we unconsciously clung, because used to the fashion of it, is questioned, and a better suggested. The sources where help may be found are named; one teacher after another describes experiences which have been helpful to her. Those who dare, because they have learned what experience means, tell of their mistakes, and what they have taught them to do or not to do.

Obviously, the supervisor must here, as in his personal visits, disclose the power of placing the teachers at their best, and here it counts for much that he has come to know his teachers personally, that he has seen their best work. He calls out the helpful suggestion, the recital of profitable experience, the detail of successful plan, thus enabling all to share in the fruit of the sanest experience. Herein lies the virtue of the voluntary meeting. It is made up of those who desire to come, truly; those who recognize their need, assuredly; but, better yet, those who have grown to realize the advantages, the privileges, the necessity of co-operation.

This is the task of the twentieth century, to learn how to live together. Slowly the nineteenth century has been spelling the first lesson in coworking. This is the secret of the trades unions, the college settlement, the National Educational Association, the teachers' meeting. "We that are strong ought to bear the infirmities of the weak." "If the Syrians be too strong for me, then thou shalt help me; and if the children of Ammon be too strong for thee, then I will come and help thee." It is hard for the nature that rejoices in personal independence to learn this lesson of interdependence, to discover that his work is incomplete except as it is supplemented and supported by the work of others. Every one of us needs everyone else. We halt and stumble alone.

In this truth lies the answer to the objector who is the bugbear of supervisors—the teacher who doesn't thank anybody to supervise *her*. She has taught seventh grade for twenty years now, and if she doesn't "know how by this time, 'tis a pity." Everyone agrees with her last statement—it is indisputable—and likewise agrees that there is but one wise course for the supervisor. Remembering the parable of the sower, he casts his seed on more promising ground for the present, and bides his time. No dictum of sage or prophet can command a thankful spirit. Until the teacher above noted really desires help, it is useless to proffer it. Better for the present to concern himself in striving to help those whose attainments are not so satisfactory to themselves and who, by virtue of shorter experience or broader vision, realize that life yet holds for them other fields to conquer.

But another holds back and says: "Why must there be this endless procession of teachers' meetings? Doesn't my certificate say that I have passed my examination and am qualified to teach in the city? Then why must I attend teachers' meetings to be taught? Am I not already qualified to instruct?"

This feeling is natural, and likely to occur wherever independent and thoughtful work is done; and often it is strong in proportion to the skill of the worker. A certain degree of self-confidence necessarily accompanies skill in any form of labor, in any department of life. Further, we are not surprised to find this expression of feeling in districts where supervision is a new feature, and the supervisor is a pioneer. All are loath to relinquish the scepter of authority. We delight in personal independence. But it is the narrow worker who most highly estimates her own skill. Shut in by the four walls of the schoolroom, and working year after year in the same round, one easily becomes fixed in habit and ideal, becomes blind and deaf to what the rest of the world is doing. Self-satisfaction is heightened by isolation. "It is required of every man that the spirit within him shall walk abroad amongst his fellow-men and travel far and wide." No man's work is effective except as it is inspired, upheld, and completed by the work of other men, every one of whom his life needs in order to succeed. Humility is the virtue of the wise, and is best developed by generous approval of good in others. Herein is the supervisor's excuse for being. The teacher is of necessity held to her place in the schoolroom, shut in with immature minds, accustomed to directing others, perhaps even to dictating. It is impossible for her to see many schoolrooms, to discover all that is good in fashion and practice other than her own, to learn how easily others accomplish that which she achieves with difficulty —succeed where she fails. It is entirely possible for her to plod toilsomely, tho patiently and faithfully, thru long years, committing again and again the same blunders, because no opportunity is given of comparing herself with others—of seeing herself as others see her. Hence the generally admitted necessity that some competent person shall be appointed who shall be able to view the entire field, to study, not one, but many schools, and who shall unite the teachers in one body, urging the strong to help the weak, to share with them their successes, to yield to them the fruits of their experience.

Again, by herself, the teacher becomes fixed in individual ways, and the course of the children from kindergarten to college, passing from teacher to teacher, is a zigzag career at best. The evils of the graded system are mitigated if there be unity of purpose along the line. Just so far as the schools unite in a common aim, the path of the child's progress becomes more direct. Co-operation is the crying need of our public-school system; unity, not uniformity; coworking, with a definite goal in mind; not the blind following of an empiric, nor the upward efforts of the misguided zealot. Somebody must secure this co-operation, or the work of the whole is not the sum of the work of the members. Only by unity of purpose and harmony of plan can the force become the most effective. This the supervisor attempts by means of his teachers' meetings.

But let him be mindful, however, that there may be too much of a good thing, even if the good thing is a teachers' meeting. The hours of a teacher's day are numbered, her weeks hold but six working days each. In cities where specialization has run to extremes and there must needs be supervisors of drawing, of music, of manual training, of gymnastics, of primary work, of nature study, these meetings may be so multiplied that they become an evil; so numerous that they leave no time for individual study or recreation. The stoutest and most loyal heart might be appalled at the flood of circulars and notifications that at times pours in upon the teachers, who are justified in replying: "If co-operation is good for teachers, why not for supervisors? Does every supervisor forget that we have to teach a dozen subjects besides his specialty? One would think there were nothing else to be done." Superintendents and supervisors may well take warning here. The study of the diary of a teacher who tried to attend all the meetings to which she was called might lead to reconstruction at headquarters, and result in the pursuance of a middle course in the future. By the wholesome exertion of the central authority such landslides should be prevented.

It will not be overlooked that these pages do nowhere represent the supervisor as a dictator. In this capacity he is not effective. He must forego greater privileges and responsibilities, if he becomes commander of details. He is not to stand in the rear and say "Go," but to lead the way and cry "Come." He may choose to dictate every step, but it is at his peril. He is a leader of freeborn citizens, who are in their places because they are accounted intelligent. It is not the part of wisdom to assume the opposite, to do all the thinking for those who must teach the children. Teachers, like other humans, grow thru their own activity. It is a debatable question whether the uniformity secured by dictation of details is worth the price paid for it, the sacrifice of strength which comes from effort in individual lines. Principles, which are eternally true and cannot be gainsaid, must be repeated and made plain, over and over again. But there is danger in the weak and docile imitation of outward devices, tricks of the trade which succeed only by virtue of the personality of the teacher—and fail when they leave the hands of the inventor.

No, the supervisor's effort should be to help the teachers to attain freedom, to master the principles which shall serve as do the measures of the poet

"'. . . . who sings
In strictest bonds of rhyme and rule,
And finds in them not bonds but wings."

Let the teacher work out her own salvation—yes, even if her success hangs in the balance—while we do our utmost to shed new light on her path, and inspire her with courage. "She must paddle her own canoe; we will sing the boat song." But we must not forget the truth which Browning writes in strong words:

. . . . Better youth
Should strive, through acts uncouth,
Toward making, than repose on aught
. . . . found made.

To withhold the manifold suggestion, to wait patiently for the slow growth, may this not be wiser than to thrust ourselves unthinkingly into the place of another and assume the burdens which of right belong to him — his privilege of responsibility and freedom? However self-sacrificing our effort to serve, the result remains the same, if the power of self-direction is wrested from those we would aid. Their strength grows with their efforts — not ours. Who shall be skillful enough to steer his bark clear of both Scylla and Charybdis?

We have pictured the supervisor as promoting, or trying to promote, good instruction. It must be in the hope of furthering the same purpose that the committee demands of him that he shall report upon the work of the teachers whom he visits and directs. The reason for this demand is obvious. The schools exist that the children may be well taught, and the committee, standing for the public, has a right to know whether they are so taught.

Yet here lies the hardest task of the supervisor, not in the ninety and nine cases which are good, but in the one. Be he supervising principal or supervisor-in-chief, he finds it a painful duty to record failure, and it is with a heavy heart that he makes such a report. His sympathies are with the teacher. For her sake he would be glad to speak the word which will retain her in her position. Her bread and butter depend on her retaining it. What can he do?

But one thing, in justice and honesty — and in mercy, too. In his office he stands before the parents of the children, these hundreds of little ones who are receiving so unconsciously the instruction which shall make or mar their future. To these parents he is virtually saying: "So far as I know and can judge, your children are receiving the best possible instruction which can be procured under the conditions you provide." If he sees, in a certain schoolroom, that the children receive little, where others receive much; if he finds them so taught that the precious hours of youth are lost; if bad habits are induced; if indifference usurp the place of alertness, and antagonism and rebellion the place of harmony and co-operation; if the weeks pass without yielding the knowledge which other children are gaining, and which these should gain — what word, in justice to the children, must be spoken? To the children it is not the question of a day's, or a week's, or a term's loss. But thru all time they shall miss what these days should have taught them, go halting where they should have leaped, walk blind where they should have seen. If we look into their faces and know their need, there is but one verdict which can be pronounced; and, hard as it may be, it must be spoken.

But never is this judgment made, I trust, without full conviction. Never is it determined until the teacher has had every opportunity to redeem her work. What are the conditions under which she is working? Is she receiving every possible aid and encouragement? Is there a previous history which makes the class hard to govern ? Is there illness at home, or double work ? Is she carrying the burden of a wayward brother, an aged father, some child who must be educated, caring for a helpless mother ? Is she paying the mortgage on the home, and denying herself proper food ? Ah, then how unutterably hard to make final the verdict! How one looks then for another opportunity, a more favorable district, an easier school, a new beginning ! And, then, how ought every teacher in the city to rally to her support, with words of encouragement and helping hand! Ah, many a teacher fails, who would succeed if all faces were friendly and all hearts kind. When the superintendent is powerless and the supervisor can give no aid, the teacher next door may help the young traveler across the quicksands, and save her for good work. Not until every helpful word has been spoken, and every opportunity seized, shall the last judgment be pronounced. Then, if the teacher must go, that a stronger hand may guide where hers had failed, there is no bitterness in her feeling. Each can say: "I have done what I could."

We have crudely outlined the chief duties and privileges of the supervisor; the two are identical. What must the qualifications be ?

He must know his subjects — that goes without saying. It would be well for him, perhaps (I am not sure), if he knew them better than any of his teachers; but he never will. Each in his own field will do better than he; the expert teacher of Greek, of science, of arithmetic, of reading, of gymnastics, will be greater in his line than the general supervisor would be, were he to take his place. And the generous-minded director will take off his hat to the expert; for herein is one of his chief virtues: he knows good work when he sees it. His knowledge of teaching, his mastery of principles, enable him wisely to estimate good work, and often to pay to it a higher tribute than would the teacher herself.

But the greater knowledge and power by virtue of which he will succeed, if he succeed at all, is his knowledge of human nature. The unnamable quality which brings out the best in coworkers, as the summer sun calls forth the fragrance of the sweet fern, the everlasting, and the pine — this is his qualification.. The innate power of delicate sympathy which enables him to put himself in another's place — by this he wins his degree. However exalted his estimate of professional technique, he never forgets that teachers are human beings, and that children are children. Teacher nature and child nature he understands. The fine art of self-forgetting he has mastered; his personal hurts he ignores, but he never forgets the teacher's, the child's personality. Behind the teacher — the man, the woman; behind the pupil—the boy, the girl. Thru all the current of school tasks, of grades, of classes, of graduations — human life. Therefore the school system in his mind never sinks into a machine; methods never become formal; directions are never dictatorial. He asks no blind following, no servile allegiance. He stands before his teachers to help them to the truth which shall make them free. "One-half of nine," explains the young graduate to her primary class. "One-half of nine is four and one over." "No," explains the supervisor to her in turn; "one-half of nine is four and one-half;" and patiently he strives to make her see it. His patience is rewarded by her willing conversion. "Well, I will teach it four and one-half, if you wish me to." No, no, no! a thousand times no! A power greater than the supervisor decrees the half of nine, and how it must be taught. Truth demands it. He speaks well only if he speaks the truth. His heart's desire is not that his teachers shall think as he thinks, say what he says, want what he wants; but that they shall know the truth, which shall make them free.

Therefore, I say again, he is not a dictator, nor does he delight in mandates. He not only tolerates, but he encourages expressions, of contrary belief — of legitimate opinion. Too wise to think a thing is so because he says so, he does not strive to encourage immediate acceptance of his dicta. He knows belief cannot be commanded. Teachers are reasonable creatures; set them to reasoning, and let time and willing work test and prove that which is good.

Patience, tolerance, genuine fair-mindedness, and humility, it would seem, are demanded of the supervisor; without these he fails. His other virtues we need not enumerate. They are legion — and this paper is limited to thirty minutes. Enough to show that it is character, here as everywhere, which commands confidence and wins success.

One word more. As these pages are written, our wide land, from east to west, is rejoicing over the victory of our fleet at Santiago. The tidings are solemn, and thanksgiving is mingled with prayer, as we read the message in its full meaning. "To whom shall we give glory?" men ask. "To this commander or to that?" And a newspaper replies: "Not alone to the one nor to the other — not theirs the glory. It belongs to the men behind the guns, and to the country who trains her boys in the public schools."

Fellow-workers, our task is a mighty one. Not alone to such victories as these, but to unrecorded triumphs, to unwritten conquests, shall our boys and girls go forth. Our combined strength and wisdom are not too great to equip them worthily. Hushed be the petty strifes, forgotten all personal bitterness. Forward for the good of the children — the future bulwark of our beloved land!

And to all who give of their utmost endeavor, all who strive or serve, all who lead or follow, there shall be equal honor and equal glory.

WOMEN'S CLUBS AS AN EDUCATIONAL FACTOR

BY MISS MARGARET J. EVANS, CARLETON COLLEGE, NORTHFIELD, MINN.

Women's clubs are, in their origin, practice, and purpose, educational.

Thru the three ideas of the value of the individual mind, of organization, and of the responsibility of every individual for the welfare of every other, has it come about that, by the most conservative estimate, one hundred and sixty thousand women are enrolled in clubs.

A large number of the clubs are study clubs and seek the mental improvement of their members in literary, sociological, and artistic lines. They are, therefore, educational; are, indeed, a part of that great current of universal education by which has resulted that condition portrayed by President Hall: "Woman is no longer beautiful as an angel and silly as a goose." The courses of study pursued in many of these study clubs are as thoro and exhaustive as any university course, and in nearly all the clubs the outline of study is worthy of the respect of any educator.

A close student of political economy is well quoted as saying: "I consider the women's clubs movement as one of the most logical developments of the new education which have yet been evolved."

For the home and the community the club is also an important, indirect educational factor. At least one hundred thousand homes are being educated by club study. The tone of community life is also improved thru these mature students, by the open sessions of the clubs, as well as by the lectures and by the university extension courses given thru the clubs.

It is thru the expression of their sense of responsibility and of duty as "daughters of the voice of God" that the clubs are bound together, and secure that "unity in diversity" which their motto enjoins. No form of activity has, however, aroused so much interest and enlisted so many members as that of public education in all its phases. Of the great mass of evidence on this subject only a few significant facts may be adduced.

Libraries have had much attention. The need is evidenced by the fact that few states have adequate library facilities; that even in New Hampshire forty towns are without public libraries; that in nearly all states the libraries, except in large cities, are few and meager; that in many states not half of the population, in others not a third, have anything to supply adequately mind hunger. Hence, club women have initiated libraries and induced the cities to assume them. In Georgia seven libraries have thus been given by the clubs.

Traveling libraries have been secured in many cases from the states, as in Ohio and Iowa. Where state libraries cannot yet be obtained, the clubs are operating local traveling libraries. Nearly every club in Georgia now operates such libraries. The Minnesota, Wisconsin, Michigan, and New Jersey clubs have many such in circulation. Nearly every state federation is working for them. School libraries have also been encouraged and aided in many ways. The Colorado clubs have secured many new school libraries. The Chicago clubs have aided nearly every school library in the city. Other Illinois clubs have contributed largely to libraries, one club contributing $1,200.

The Georgia clubs circulate books in remote country districts. The Minnesota federation issues a list of children's books.

In nearly every one of the thirty state federations, as in Iowa, where forty-five clubs have aided libraries, the good work is going on.

One part of man's complex nature has, in our civilization, received scant nourishment. It is the æsthetic nature. To remedy this defect, the women's clubs are exerting themselves to promote in every way the knowledge and love of art. They are decorating schoolrooms and giving to the schools reproductions of the masterpieces of art in pictures, casts, and portfolios of photographs. They lend fine pictures to homes, and admit school children free to art exhibitions. Such work as that of the Minneapolis Improvement League, which has given to twenty-five schoolrooms valuable pictures as prizes for the cultivation of flowers, speaks for itself. The school art leagues indicate another form of result from æsthetic development.

Outdoor art and village-improvement work for children is another field worked by the clubs. The next generation will have, thru these efforts, better notions of civic cleanliness, and may be able to avoid the three direful D's—disorder, dirt, and disease—so prevalent now. The civic work for children in New York, Philadelphia, and in many large cities; the placards, enjoining care for beauty and cleanliness of the Minnesota schoolrooms, emphasized, as they are, in language lessons; the Rochester, N. Y., prize questions on the natural, architectural, and possible beauty of their cities, are educational straws of value.

Instruction in household economics and manual training has also occupied the women of the clubs. Two quotations from the Minnesota educational circular emphasize the need: "Half of the money earned in the United States is spent for food;" "Six hundred million dollars are annually wasted in American kitchens." The clubs are expending large amounts of money and energy in securing instruction in cooking, as well as in sewing and other manual training, and in obtaining departments of household economics in colleges and universities.

It is said that the chief of police in San Francisco once said: "If there were kindergartens enough for all children, no police would be necessary in the next generation." There is truth enough in the optimistic statement to warrant the efforts of the clubs in twenty states in laboring to promote free kindergartens and to incorporate them into the public-school system. The clubs of several states have largely succeeded; others, as the Chicago and the Georgia clubs, are operating many free kindergartens as an object-lesson.

The establishment of vacation schools and playgrounds also makes the clubs an educational factor. To prevent the training in crime and immorality which the idleness and the associations of the streets give to many children, schools and playgrounds have been provided and aided by the clubs in New York, Chicago, and other cities, with most encouraging results.

Night schools and schools for needy working boys and girls have also done good work. In one city sixty teachers in the poor districts are supported by the clubs.

Mothers' clubs, parents' and teachers' leagues, and child-study classes have all come under the fostering care of the clubs. One of the important steps of the year has been the organization of a large number of such clubs, and the union of those which already existed into a closer bond. The special committees of the state federations for this purpose have accomplished much. Of one typical mothers' club it is said: "Hebrews, Catholics, Protestants, and those of no creed meet continually in harmonious emulation."

Similar to this interest has been that in the establishment of children's leagues and reading circles. Georgia reports 130 such circles started by the federation.

Open educational meetings have done much where no mothers' club is organized.

Auxiliary clubs for self-supporting women, for girls and boys, for all sorts and conditions of women, indicate a wider educational effort.

Visitation of schools and investigation of school conditions have been organized by the clubs, to remove the anomalous separation hitherto existing between the home and school. "Mother, don't you come again to visit our school; no one else does, and the boys all think I've gotten into trouble!" is the thought of more than the Chicago boy who uttered it. Nearly every club has now a committee to study personally the needs and excellencies of the schools. The clubs have, in consequence, secured by petition more schoolrooms, better ventilation, greater cleanliness—needed changes in arrangement and school conditions. The statement of one state superintendent of instruction is still true of some schools in almost every state: "The condition of things would disgrace an Apache Indian." But information is beginning to bring reformation. The needs and excellencies of our schools afford abundant room for investigation. Hostile criticism has no place in the club scheme.

Co-operation and co-ordination with other educational forces mark a further advance. Union with teachers' associations, local and state, has been found fruitful. Discussions in meetings on such topics as, "How the homes may help the schools," and, "What the schools may do for the homes," have brought parents and teachers together. In fifteen or twenty states conferences between the women of the homes and of the schools have been held. Club women have been invited in large numbers to address educational associations. County and state superintendents have been glad to accept the aid of the clubs and to co-operate with them. It is manifest that club work must rest its greatest hopes on this co-operation. It must enter the social world also; not until parents and all interested realize what they owe to noble, faithful teachers, and come into friendly, social intercourse with them, by inviting them to their homes, can any true sympathy exist between the parents and the schools.

Legislation to improve school conditions has occupied the clubs. The results may only be hinted at. Georgia has secured a library commission, with the chairman of the federation committee upon it; and is also seeking to open her university to women. Missouri has taken steps to provide for women on school boards. Minnesota has secured permission for a public vote on library suffrage for women. Maine clubs aided in passing twenty bills to improve school conditions. Many states have prepared bills for traveling libraries; for better truant laws; for free textbooks; for skilled superintendence for united schools. In one case the clubs have aided in securing 2 per cent. of the school funds for raising teachers' salaries. There is concerted effort everywhere to induce good women to serve on school boards.

Knowledge of school conditions and general interest are, however, the greatest result already accomplished by club educational efforts. That 160,000 women are now studying the needs of our schools, and are eager to help in every way, is a promising indication. In many states all the different lines of work mentioned have been taken up by the clubs. In twenty-five states one or more has been undertaken. The reports from nearly all of these twenty-five states read like that of Colorado: "In several towns new public or circulating libraries and reading rooms have been opened. Three clubs have established traveling libraries. The study and appreciation of the best in music and art have been promoted in hundreds of towns in the state. Three clubs have given exhibitions of fine pictures, and have loaned pictures to the schools. Kitchen-garden work has been successfully carried on, and the study of household economics with classes. In five towns child-study circles have been formed by the women's clubs; in ten, parents' meetings are held; in nine, women are members of the school boards; in four, public kindergartens have been established; in three, manual training has been introduced in the public schools. In all the club towns of Colorado the teachers are welcome members of the clubs and heartily co-operate with the appointed school visitors. The club members have studied, and have a good understanding of, the excellences and the faults of our schools."

In all these departments of education the women of the homes in the clubs have been laboring with other educators, to make more effective the public schools. There has been no ambitious effort to strike out in entirely new lines.

One phase of education not much considered does seem, however, to club women to be worthy of their deepest consideration. The subject of systematic instruction in morals in the public schools is, therefore, the most discussed feature of the clubs as an educational factor. That right moral character is of more importance than all other things which I have mentioned, put together; that to secure it for pupils is success, and not to secure it is failure in education, all are agreed. Yet, practically, upon this part of education is placed less emphasis; to it is given less thought and attention; to it applied less system and method, than to any other part.

Theoretically, the responsibility for moral education is laid upon the home. But the home, accustomed to shift educational responsibility, is often intrinsically inadequate to the task of giving moral instruction. Besides, in most cases the moral tone of the home depends upon the training which the parents have received in the schools. Even the best homes need, too, in moral training the co-operation of the schools. To give adequate moral education neither Sunday school, church, nor press can be depended upon. The public schools are intended to give it. The solemn and majestic declaration of the "ordinance of 1797" is: "Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." Religion, morality, and knowledge! A reaction against denominationalism has made the teaching of religion, as such, in our schools objectionable.

Morality and knowledge are still in our purpose; morality, as distinguished from religion, being chief. Yet, in some strange way it has come about that moral education receives less scientific attention than any other phase, is treated in most schools in the most haphazard, incidental way, or is not considered at all, being left at the option of the most indolent, indifferent, or inexperienced teacher, who is always hard pressed for time for what are called "the regular studies."

To be sure, a large part of the school routine and discipline tends directly to aid in building up moral character. School virtues, such as obedience, self-control, and many others, are developed in some degree. The incidental lessons of history and literature cannot be overestimated. The example of noble teachers is an incalculable power, which, with the other aids, has kept our nation and its citizens from moral destruction.

The roseate theory is: "Morals in the public schools are absolutely without intermission, but without intrusion. The entire atmosphere of the schoolroom and of the playground is redolent with grace and truth." That the facts do not support this theory we all acknowledge. Every teacher wishes for a higher tone of moral life in the school, and for nobler moral character in the pupils. Do present means accomplish what is desired, or may reasonably be expected?

Picked-up ideas and a pervasive atmosphere of morality serve as well as a preparation for the business of living as picked-up ideas and a pervasive atmosphere of arithmetic would serve as a preparation for the business life, and little better. Yet we trust to picked-up ideas and a pervasive atmosphere of morality. In all other subjects we have evolved good methods of teaching and of training teachers.

Only a visionary expects the immediate perfectibility of the race. Is it visionary, however, to expect to secure thru the schools a constantly ennobled moral character?

The women's clubs, while valuing highly all that has been done, are questioning the possibility of a great advance in education. It is to secure for every pupil of our public schools, even for the 80 per cent. who leave school forever at the end of the fourth grade, a scientific, systematic, continuous course of instruction in morality, as distinguished from religion.

In few things has there been greater progress in the last two decades than in education in general. Yet, in moral instruction, has there not been a lack of progress, if not retrogression?

With the Bible and the teacher's prayer went out of the school, not much religious instruction, but much explanation and emphasis of moral truth, and of its application to daily life. What has taken the place of this moral instruction? In most schools, nothing.

Systematic instruction is necessary to give clear distinction between right and wrong. Miss Addams tells us how the voters in a certain ward of Chicago elected a corrupt alderman, because to them the big-hearted friend who gave turkeys, flowers, and wedding gifts, and, above all, employment, even from stolen wealth, seemed a good man. She says: "It is precisely on the undeveloped morality of voters that municipal corruption flourishes. Theirs is largely the crime of ignorance of what morality is; they live up to their highest conception of morality and civic duty."

Where shall the next generation of voters get their higher conceptions of morality and civic duty, if not in the public schools? Where shall the army of boys who, at twelve years of age, enter business life get their clear, high ideas of morals? In business itself? with its present practices in all but the highest grades?

Systematic instruction in morality is also necessary to secure that robustness of moral power which preserves from self-deception in moral emergencies. "Yes, it was right for me to lie then; I had to; there wasn't any other way out of it," said a boy. He has many companions, self-deceived from lack of moral robustness. Where shall they obtain the instructions which will give them moral vigor? At the need of a place for systematic training of the will in our school curriculum I may only hint. To prevent crime by this means is surely wise.

These are the burning educational questions discussed in the women's clubs. They appreciate the difficulty of reconciling the schools of philosophy which differ on the basis of morality. But women believe that this difficulty is mainly theoretical, and need not interfere seriously with the teaching of that body of moral truth which is the possession of the age. The women see the difficulties as to methods of teaching. It is evident that preaching and the tedious repetition of moral maxims will avail little. The instruction must manifestly be concrete and by illustrative examples adapted to the age and experience of the pupil. That time be allowed to every teacher, and she be instructed how to use it for moral teaching, is the main need. All difficulties as to principles or method will doubtless vanish, as they have vanished in other departments, when due attention and thought are given by educators to these things.

The clubs are asking: Is it too much to hope that this National Educational Association may give due attention and thought to this, the most important subject possible for its consideration? Is it too much to hope for a special committee upon it? It is surely as pressing as any subject which has come before committees of ten or fifteen. Teachers desire it; parents long for it; Catholics and Protestants, Lutherans and agnostics unite upon this: "Lift up the child."

The women's clubs desire, in this as in all other ways, to be an educational factor.

DISCUSSION

THE CHILD'S COURSE OF STUDY OR THE TEACHER'S—WHICH?

BY MISS SARAH J. WALTER, STATE NORMAL SCHOOL, WILLIMANTIC, CONN.

My story does not begin with "Once upon a time," or "A long, long time ago," but "A short time ago." A few years ago a gentleman was elected to take charge of a system of schools. He was earnest, interested, and ambitious for the welfare of the schools. He ascertained the number of grades, the advancement of the pupils, and the average age of the pupils of the several grades. Before school opened in September, he had formulated a course of study for the schools of which he had assumed charge. For whom was this course intended? Certainly not for the pupils. It was based upon what the teacher thought the pupils ought to be able to do, and was not a growth proceeding from the needs of these pupils, and an outgrowth of the same. A pupil's course of study must have the quality of local adaptation.

A superintendent sits in his office and prepares outlines; the amount of work in each subject is indicated; the subjects are prescribed — just so many topics to be presented; the outlines are printed and distributed, and scores of teachers begin to experiment with hundreds of children. The teachers are loyal and heroic; there are many struggles, some breakdowns, and not a few pupils fall out by the way; but by the end of June the ground has been covered, and the teacher has been victorious so far as the course of study is concerned. The superintendent has been busy thru the year; he has not had time daily to watch the work; the teachers did not protest, altho one teacher did say to her next-door neighbor of the schoolroom that she knew that she could do a great deal more for her boys, so far as their morals were concerned, if she could only place before them more ideals as presented by characters in history instead of giving them so much formal language work; another felt that the arithmetic was entirely too much for her grade at its present stage of advancement; but the course must be followed. The teachers did not make a protest; their criticisms were not solicited; and during the summer the superintendent revises and enriches the course of study.

There are schools noted for their excellent work — boast is made of the beautiful penmanship, executed by the weak muscles (and, later, weaker nerves) of little children of the first year. In these same schools, by the time the pupils are fourteen years of age, they have had more arithmetic than they can possibly use in a lifetime, no matter how long it may be. The time has come, so far as the physical welfare of the youth of this nation is concerned, when the work presented in our schools should not be done at high pressure, and recognition should be made of the truth that there is time and more than time enough for the work to be presented, if it can be given at the appropriate time. The courses of study I have described are logical — one step grows out of the other in a most orderly way. A proper relation is maintained between the abstract and the concrete. They are comprehensive, they are complete; but they are courses of study for the teacher, and not necessarily for the child.

The ability to make out a child's course involves close acquaintanceship with three lines of work:

First, knowing well, being well acquainted physically and sympathetically with, the material upon which the effort is to be expended, namely, the child; to know his different mental moods thru the varying periods of growth. There are teachers who meet their pupils twice daily, but at the end of the year they are strangers to each other. In that beautiful glimpse of child life given in Kenneth Graham's *Golden Age* you will remember the story of the road to Rome. The artist and the boy visited Rome that sunny afternoon, and, when the shadows began to lengthen, the artist said to the boy:

"I hope we shall meet again."

"Certainly, we shall."

"In Rome?"

"Yes, in Rome, or in Piccy—the other place."

The artist had been to Rome; the boy recognized it. He had met someone who understood him.

Second, he must know how to select and adapt the subjects to the various stages of development. There are many subjects, many topics in each subject presented for selection. To select wisely one must have breadth of scholarship. The richest course for Washington may not be adapted to the children of manufacturing New England, or to the mining states of the mountain district. To know how to select and adapt, scholarship and latitude are necessary requirements. The teacher must be absolutely free and untrammeled in giving to pupils what they require for their development. No one can judge of the particular needs of a school so well as the teacher, and the teacher should be free to select, adapt, and administer. This is especially true in the grammar grades. It is here pupils lose interest, drop out; it is the crucial period in the public-school course. The boy does not want to go to school; the father does not make him; the father meets the difficulty by saying that, when he was John's age, he left school, too; didn't want to go. In a certain manufacturing city only about 20 per cent. of the pupils entering the first and second grades graduate from the grammar grades into the high school, and in this same city the number of pupils graduating from the high school is proportionately less than that of the grammar school. This city is, perhaps, no exception. It is not the struggle for existence alone, or the necessity for becoming breadwinners, that accounts for this falling off. It is due to starved interests — the pupils lose interest.

The grammar- and lower high-school courses should be especially broad, rich, and sufficiently enticing to the pupils of these grades; in other words, they should be many-sided in order to meet the activities and many-sided interests of this active age.

Teachers of these grades should realize that it is their duty to prepare the boys and girls, not for promotion into a high school, or entrance into a college, but to fit them for living. This means more scholarship on the part of the teachers, more frequent promotions, and a program rich in culture materials.

Third, there must be in the mind of the one who prepares the course of study a clear idea as to the end to be attained.

What higher, more complete ideal than that given by Marcus Aurelius: "But this education and the teaching of youth aim at something. In this, then, is the value of the education and the teaching that the thing which has been made should be adapted to the work for which it has been made." What higher ideal of child development thru education than this — to do well the work of life? The aim is high living, not mere intellectual development.

In a pupils' course of study the natural interests of the different stages of the child's development are given due consideration. Indeed, they are paramount in importance. Materials are carefully chosen in order to give right adaptation to the social and industrial environment.

A natural course of study for the pupil is based upon the needs of his unfolding organism. The course recognizes that the child stands with open eyes, ears, and hands to take in what the world of men and things offers; that he is full of poetic fancy and imagination, and possesses artistic taste and feeling.

To provide for the healthful growth of the imagination, to cultivate artistic taste and feeling, to develop broadly the perceptive range, may be considered as the chief functions of a natural course of study for the elementary schools.

Nature, literature, art, relations of magnitude and number, manual training, physical activity, and original work provide the materials for a culture course of study. In the brief time allotted the value and place of each subject named cannot be shown, but several of them cannot be passed over in silence.

By nature is meant all life; natural phenomena; the earth; the air, its properties and movements; the water, its forms and work; the metals and minerals in the occupations and arts; the life of the field and forest, with habits and conditions of growth; insects as helps and pests in garden and field; the bee, earthworm, toad, and bird have new significance when their wonderful work is considered. These are some of nature's objects; they are not foreign to the child, but are around him and furnish the materials for sensory training, and form the foundation upon which much of his future knowledge is to be built.

Geography is a culture subject for the grammar grades, and gives, when approached in a scientific way, much valuable training. Huxley has said that "Physical geography (for want of a better name) is the peg upon which the greatest quantity of useful and entertaining scientific information can be suspended." One of the best things connected with the study of geographical material is its universal presence and abundance — "wherever our home is, there lie all the materials which we need for the study of the globe."

Whatever the general theories may be regarding the desirability of sense training thru the study of nature, observation and printed outlines of study seem to indicate that sensory development is a good thing in the kindergarten and primary, and is practiced there, but is not of much importance in the grammar grades. Many grammar schools do not offer the pupils any systematic instruction in elementary science. The grammar grade is the place of all places in the school system in which nature should be studied. The nature studies offer to an unusual degree opportunity to develop concentrated attention, and this thru subjects which appeal to natural interests and stimulate and satisfy the child's native curiosity.

Concerning number work, young children have very little use for what is ordinarily taught under this name. In place of formal number, the end of which means acquisition of number facts, exercises with geometric forms and quantity, which have for their aim exact imaging, comparing, and constructing, are far more valuable. Almost all of the work known under the name of arithmetic should come into the upper grammar and lower high-school years. Arithmetic is for the more mature school age, and when begun should be pursued in a strong, vigorous manner.

In an ideal course, literature, history, art, and music receive prominent emphasis on account of their refining and emotional values. They represent man's highest and best ideals.

The school can well afford to spend time upon these culture subjects, to have pupils love and feel the true and beautiful, before they are prematurely forced to take up the formal side of these subjects.

History, when presented in the concrete, is a most fascinating and inspiring subject. Let us not limit it, however, in area or time in the grammar grades, but give broad range and allow the pupils to become acquainted with those characters and events which have stood for human progress in all ages.

No course can be complete which does not provide for the child's demand for activity. There is too much seat work — sitting on seats to work. More board work, more table work, of a character to give a chance to use the lower limbs, should be employed.

It has been said again and again that American pupils lack imagination. If this is true, then the course of study is largely responsible for it in not bringing to the child the right subjects at the right time, and in not giving time to the pupil to work over the matter presented. In so far as possible, the pupil should put something of himself, of his own thought and making, into each school subject. The pupil who originates, who constructs, will not be mechanical and lack in creative power.

The points that have been presented are these: (1) A course of study, to be stimulating and conducive to the highest development of the pupil, must be based upon the natural interests of the growing child. (2) That those who prepare courses of study need wisdom along three lines: they must be earnest, sympathetic students of children; there must be scholarship to select and adapt subject-matter, freedom to give to pupils what they need at the time they need it; a high ideal of child development. (3) A natural course of study must be rich in content and suggestion, especially for the grammar grades, to meet the many-sided interests and activities of this active period. Lastly, the life of the course — of any course — is the teacher. The need of our schools today is the strong teacher, vigorous, inspiring, scholarly. One of our own countrymen has well said that "The key of an efficient school system is not the school property, nor the appropriations necessary for its maintenance, indispensable as they are. Reason, experience, the common consent of all great thinkers and authorities upon the subject agree *that the teacher is the school.*"

THE TEACHER AS A TRAVELER

BY MISS LILLIE A. WILLIAMS, STATE NORMAL SCHOOL, TRENTON, N. J.

This seems to be a rather unfortunate time to urge upon you the advantages of foreign travel, now while our hearts are still palpitating with horror at the recent ocean disaster. Still, in face of this awful loss of life we must note that we take fewer chances of accident when we go aboard an ocean steamer than when we enter a railroad train. There is a smaller percentage of travelers lost on the sea than on land. Foreign travel is for teachers the best means toward culture. Without going so far as the poet Gray, who wrote, "Travel I must or cease to exist," or as Mr. Grant Allen, who regards a two-years' trip abroad as far more than equivalent to a full college course, we may recognize the fact that we teachers — and I have women teachers more particularly in mind — may in this way be best drawn out of our ruts and into contact with the great currents of life and into the stream of ideas, much better than thru books, or reading circles, or even clubs — for these are accompanied by more or less of brain-fag to brains too often already overworked. It is even better than this, for thru travel we not only turn over our ideas, but our livers; quit of the daily grind, we bask in the unusual and lay up a store of health to last us thru the year.

All travel is good, but for us who have mostly to compress our tours into the narrow limits of a summer vacation a preparation of mind is needed to secure the best results. Where one cannot linger long, the only way to secure a deep impression is to have the mind in an attitude of expectant attention; to know well beforehand what one is to see. Indeed, this is the best plan even when time is not limited. I have always remembered with pleasure the story of the great historian Gibbon, how, when about to make a tour in Italy, he paused at Lausanne to prepare his mind for what he was to see. The list of books which he read — both ancient and modern — is appalling. He made his own guidebook, and, when he did cross the Alps, surely Italy never before found a more appreciative or sympathetic visitor. No wonder that, while visiting the Roman forum, he conceived the idea of his great work, and that the outcome of his tour was *The Decline and Fall of the Roman Empire,* "the splendid bridge which unites ancient and modern civilizations." "He that would make his travels delightful must first make himself delightful," says Seneca. Du Maurier in one of his pictures, in which he satirized the world around him, represents an American mother and her daughter who, having made a tour in Italy, visit London. They are introduced to Sir James, who, seeking to make talk, says: "So you have been in Italy. Did you visit Rome?" "Well, no, I guess not. Say, Belle, were we in Rome?" "Why, yes, mamma, certainly; don't you remember those excellent lisle thread gloves we got in Rome?" The lone mother of dead empires, the city of the soul, was anchored in that ill-furnished mind by the single mean association of a place where a bargain in clothes was secured.

Read, then, as copiously as may be beforehand, but do not fall into the delusion, from which some suffer, that walking the streets of Paris and Rome with Hare in the pages of his books, or viewing the Alps with the artist's eye of Ruskin, or climbing them with the scientific ardor of Tyndall, is as good as seeing these sights with the bodily eye; and so one might as well save one's money and stay at home. Read as deeply as you may, still the first great cathedral you enter will fill you with an awe which you cannot feel without the actual experience. I may seek to paint in words the Mätterhorn as it looks down on Zermatt, or try to tell how

> "The midnight sun on the waters lay,
> And blood-red was its hue;

It was not night, it was not day,
But wavered twixt the two;"

but the sight of the reality makes the word-picture poor.

But no amount of previous preparation will enable one to take in apprehendingly the whole of Europe in a two-months' tour; or, even if we restrict our travels to but few countries and their most famous cities, can we take in all that they have to show. It is a sad sight to see in a great art gallery, or palace, or cathedral, an American woman — and she is too often a teacher — rushing around, guidebook in hand, only glancing at the objects before her long enough to check them off on the margin of the book, so as to be able to say, "I saw them." Some are goaded on by the terrible fear that, after returning home, someone will say to them, "Did you see so and so?" and she, with shame and confusion of face, must answer no. I saw a tourist hastily passing thru room after room of one of the richest of the great European art galleries, scarcely able, seemingly, to give thought to the treasures around her, so absorbed was she in the quest for the man without arms who copies pictures in this gallery with his toes. Some friend had seen this man on a previous tour, and she felt that her trip would be a failure unless she saw him also. As a part of our previous preparation, we must select the best pictures and statues, the places with the noblest literary and historic association, but these must be dwelt upon, not simply glanced at, if we mean to make them part of our memory treasures. The ideal way to see such things was Wordsworth's way. You remember how he tells us:

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When, suddenly, I saw a crowd,
A host of golden daffodils.
Continuous as the stars that shine
And glitter in the milky way,
They stretched in never ending line
Along the margin of the bay;
Ten thousand saw I at a glance,
Tossing their heads in sprightly dance.
The waves beside them danced,
But they out-did the sparkling waves in glee.
A poet could not but be gay
In such a jocund company.
I gazed and gazed, but little thought
What wealth the show to me had brought.
For oft, when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye,
Which is the bliss of solitude,
And then my heart with pleasure fills
And dances with the daffodils.

We must bring to the treasures of the old world a sympathetic spirit. It is possible to see in "The Last Supper" of Da Vinci nothing but a faded blotch; to see nothing in the scene of "Rizzio's Murder" but the smallness of the room. Mark Twain, thru his *Innocents Abroad*, is perhaps responsible for a large amount of the shallow jocularity which many Americans think it knowing to display in the presence of the relics of the heroic dead.

We must bring with us, too, a fine imagination. Lowell, in his *Fireside Travels*, complains that the fault of modern travelers is that they see nothing out of sight. "Tourists," he says, "defraud rather than enrich us. They have not that sense of æsthetic proportion which characterized the elder traveler. Earth is no longer the fine work of art it was, for nothing is left to the imagination."

Whatever else we see abroad, we must see the people, or our trip is a failure. I do not mean kings and queens and high nobility — tho they are interesting, too — but the plainer folk. How stimulating I found it to discuss the situation in the Transvaal with a cultivated clergyman from the Cape of Good Hope; to listen to a criticism of Olive

Schreiner's *Story of an African Farm* from the lips of his wife, who had passed her childhood among the Boers there described, to hear of the tea industry of Ceylon, and its effect upon the prosperity of the island, from a lady recently come from one of the tea plantations. As a teacher, let me urge a closer acquaintance with the foreign teachers. With what pleasure I recall amiable French teachers, and their kindness, or the courtesy of the two kindly Dutch women teachers — my traveling companions of a day. What interesting accounts they gave me of the two queens, and of the politics of their country. They longed to travel in America, but, having but five weeks' summer vacation, had contented themselves with a tour in the Hartz mountains. I recall, too, the intelligent young Norwegian who, as a special favor, was assigned to us as our guide up into the *fjeld* and back. A lineal descendant of the great Thorvaldsen, he had been trained for the profession of teacher in the training school of his district. He spoke English, French, and German. In the winter he taught a school of thirty pupils, teaching the languages and slojd, and this for a sum incredibly small. I recall the two young ladies, teachers from Trondhjem — our kindly guides thru the wonders of Skansen. And the two Swedish girls, who, having spent their vacation at the exposition at Stockholm, were our fellow-voyagers on the canal, and sang by moonlight of Sverige, sweet Sverige, till one could almost wish to be a Swede oneself.

And, finally, one of the highest culture values of travel is found in coming home again. No one really knows and values his country till he has temporarily detached himself, and, returning, glimpses the familiar from a slightly changed standpoint. Never did I estimate at their true worth our American ways and our American manhood, and its attitude toward womanhood, till the occasion of my return from a certain foreign trip — but that is a story too long to tell; it would take another ten minutes.

DEMOCRACY AND EDUCATION

BY EDWIN P. SEAVER, SUPERINTENDENT OF PUBLIC SCHOOLS, BOSTON, MASS.

When Germany, prostrated and humiliated by disastrous war with the first Napoleon, sought to re-establish her national power on a solid foundation, her far-seeing statesmen rested their best hopes on popular education. Then was formed that admirable system of public instruction which other nations have been willing to study as a model, but which no nation has yet surpassed.

After two generations Jena was avenged at Sedan; and the third Napoleon surrendered the destinies of France to the leaders of the victorious, school-taught German army. Then the French people, in the bitterness of their humiliation, recognized one great cause of their national weakness, and forthwith resolved to make universal popular education a matter of chief concern in their restored republic. They even turned to Germany for educational models. Partly by adopting these, and partly by reanimating ideals of their own, handed down from their first republic, the French people have now taken rank among the most progressive of nations in respect to popular education.

England, too, in the last two or three decades, has made a long advance toward universal popular education. She has been moved to do this, not thru the humiliation of defeat in disastrous war, but by the rising demand for universal suffrage, and by a view of the national dangers which threaten to grow out of the ignorance, the misery, and the sullen discontent prevalent among the populace of her towns and the peasantry in her rural districts. "Let us educate our governors," say the now ruling classes, "if, in the end, the people are going to govern."

In European nations popular education has been adopted as a governmental policy, either to raise the national spirit from humiliation or to promote national power and security by making the masses of the people intelligent and loyal, prosperous and contented. The most absolute of governments — Russia, for example — may and do foster popular education for national ends, or for the general welfare of their subjects. In the latter case it is paternalism. All European governments, even republican France, are paternal in a greater or less degree. The more centralized the government, the more paternal its action.

But in America popular education owes little to paternalism. It has not been conferred as a boon by the government on the people; but the people themselves have chosen to promote education thru the action of their governments. With us the institutions of popular education have been a growth attending, stimulating, and stimulated by the growth of democratic principles. As the colonies, and later the states, have grown more and more democratic in spirit and in policy, so have free schools been multiplied and improved, in order that a good education might be brought within easy reach of all the people. It early became an accepted maxim that every child had a right to an education. There were laws by which the unwilling or negligent parent might be compelled, and the parent who was unable assisted, to do his duty in this regard.

But this was not for the child's sake alone. The child's right to an education was, more properly speaking, the community's right that the child be educated. The right to an education rests not only on the relation of child to parent, but largely also on the relation of the child to the state. The child is soon to become a free citizen of a free state. He is to be a sovereign; and much will depend on his being intelligent and honest. His right to an education, therefore, has been embodied in the fundamental laws of our states as a part of that security for free men and free institutions which those laws are designed to give.

In the constitution of Massachusetts, for example, may be found this language of the patriot John Adams:

> Wisdom and knowledge as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties . . . . it shall be the duty of legislatures and magistrates, in all future periods of this commonwealth, to cherish the interests of literature and the sciences and all seminaries of them.

Herein is declared a principle broad enough to support the most liberal educational policy any free state might desire to adopt. It is the broad democratic principle of free public instruction.

But John Adams was a federalist in politics; and, however democratic his doctrines, he may possibly not be accepted as a high democratic authority. Let us then cite the highest democratic authority, Thomas Jefferson, who is rightly called the father of American democracy.

This great statesman again and again, in his state papers and in his correspondence, insists on free and universal public instruction as a fundamental element in the domestic policy of a free commonwealth. He advocated for Virginia, tho without success in his own day, the establishment of a system of common schools, to be supported by local taxation, for the elementary education of all children. He further advocated a system of academies or colleges for the instruction, at the public cost, of all youth discovered in the lower schools to possess the talents and the disposition worthy of a higher education. And, finally, he succeeded in securing public support of the highest education, when he persuaded the legislature of his state to establish the University of Virginia.

This renowned institution adorns the memory of Jefferson no less worthily than does the immortal Declaration of Independence itself.

But Jefferson's interest in the promotion of universal popular education never waned. Late in life he wrote:

> A system of general instruction, which shall reach every description of our citizens, from the richest to the poorest, as it was the earliest so it will be the latest of all the public concerns in which I shall permit myself to take an interest.

Accepting, now, the democratic principle of free public instruction in common schools, in high schools, and in universities, we are next to meet the questions: What limits, if any, should be observed in its application? How far may the state legitimately proceed in depriving the parent of the benefit of his child's labor and service in order to secure the child's education? To what extent ought the public revenues to be applied to the education of the comparatively few youth whose circumstances in life permit their remaining longer under instruction in high schools and in universities? These, and questions like these, are often asked as if answers were to be got somehow out of the theory of democratic government.

Let us see what the right answer is. Our high authority, Jefferson, nowhere suggests limits to the public support of education. In his view, primary education, supported by local taxation; secondary, supported partly by local communities and partly by the state, and superior, supported wholly by the state — all these should be carried to any extent the people in their wisdom might determine. The people will decide. The only answer, therefore, to the question of limits to the public support of education is the answer returned by the best public opinion that can, thru public discussion, be made at any time to prevail. Theoretically there are no limits beyond which a government of the people and by the people may not act for the people in education as in anything else.

But, it may be said, granting there are no limits to what the people may rightly do in supporting the higher education, if they choose, yet there ought to be reasons proving it wise for the people to go so far as is often proposed. If the benefits of the higher education can be bestowed on only a few, why should they be bestowed on any, at the public cost? Is it democratic to educate the few at the expense of the many? Let Jefferson answer in language used by him in setting before the legislature of Virginia the purpose for which the university of that state was to be supported at public cost:

> To form the statesmen, legislators, and judges, on whom public prosperity and individual happiness are so much to depend; to expound the principles of government, the laws which regulate the intercourse of nations, those formed municipally for our own government, and a sound spirit of legislation, which, banishing all arbitrary and unnecessary restraint on individual action, shall leave us free to do whatever does not violate the equal rights of another; to harmonize and promote the interests of agriculture, manufactures, and commerce, and by well-informed views of political economy to give free scope to public industry; to develop the reasoning faculties of our youth, enlarge their minds, cultivate their morals, and instill into them precepts of virtue and order; to enlighten them with mathematical and physical sciences, which advance the arts and administer to the health, the subsistence, and the comfort of human life; and, finally, to form them to habits of reflection and correct action, rendering them examples of virtue to others and of happiness within themselves — these are the objects of that higher grade of education, the benefits and blessings of which the legislature now propose to provide for the good and ornament of their country, the gratification and happiness of their fellow-citizens.

The doctrine here set forth is that a democracy must educate its leaders. So, indeed, must an aristocracy, or the ruling class under any form of government. All civilized governments provide higher education for the youth who are expected to exercise the higher functions in the state. If the government and society be aristocratic, the higher places in the public service and the opportunities for political leadership, as well as the education necessary for these, are restricted to the privileged and wealthy classes. But in a democracy the opportunities for leadership and places in the public service are open freely to all. Native talent for leadership, the power to persuade multitudes of men and to determine their action, are inborn gifts, not restricted to any one sort or description of men. Leaders spring up anywhere, at any time; and the people, whose delight is to be led, trust them and follow them more or less blindly. There are no questions of public policy, of peace or war, of annexation or conquest, of revenue and expenditure, of commerce and industry, of banking and currency, or of ethics, law, and justice, which self-appointed popular leaders, however ignorant or however knavish, do not presume to discuss and decide for their followers. Hence in a democracy, much more than under other forms of government, does the public weal depend on the character of the men who assume popular leadership— whether they be demagogs or whether they be wise and honest statesmen. An absolute government can suppress demagogs; a democracy must educate them.

Another high authority, Francis Wayland, says:

> In order to the most perfect condition of any society, it is necessary that, whatever unusual talent of any kind exists, it be so cultivated as to be able to accomplish the highest results of which it has been made capable. This talent is very equally distributed among the various orders of society; least of all is it limited to the rich. But the means for the thorough and radical training of a human mind are very expensive. They involve the cost of libraries, philosophical apparatus, laboratories, and a formidable array of teachers of distinguished ability. Were these to be provided by individual enterprise, the expense would be so great that none but the rich would be educated, and by far the larger part of the talent of a country must perish in useless obscurity. Hence arises the reason why a larger portion of these means, all that which involves the outlay of considerable capital, should be the property of the public, and why it should be open to the use of all who might by the use of it be rendered in any way the benefactors of the whole. The design, therefore, of university establishment, so far as the public is concerned, is . . . . to foster and cultivate the highest talent of the nation, and raise the intellectual character of the whole by throwing the brightest light of science in the path of those whom nature has qualified to lead.

In this passage the former president of Brown University has clearly pointed out the great public purpose for which university endowments exist, whether those endowments are made by the state or by private citizens. There is always a danger, even among a democratic people, lest the institutions of higher education be managed in an undemocratic spirit, as happens when education in them becomes so costly that only the rich can afford it, while those who receive it as a gift are thought to have compromised their self-respect by accepting a charity. Institutions so managed do but foster certain aristocratic tendencies which are always latent in a democratic society; but to which the spirit of the higher education ought always to be opposed.

Let us now consider the stage of education which precedes that of the university, but follows the common schools, and inquire what is demanded here by an enlightened democratic policy.

The interest of the commonwealth in the higher education of all the ablest and worthiest of her youth being, as we have seen, predominant, it follows that free schools for secondary education—that is, academies and high schools—should be easily accessible to all, should be efficient, and should be kept at all times in close and vital relations with the universities.

The public high school, supported by local taxation, has now to a large extent displaced the classical academy of our grandfathers' day. The academies were always closely bound to the universities; they lived but for them; and the academies that have survived to the present day have been able to do so by becoming nothing else but mere fitting schools for the universities. But the relations between the public high schools and the universities, more especially in states having no state university, have not been satisfactory until quite recently. This has been because the universities have heretofore insisted on a narrow, tho excellent, line of study—the classical curriculum—as the only proper course of preparation for the university; while the people in their public high schools were preparing youth, some for the university, but many more for active life, by using for the latter purpose a much broader range of studies. None of these latter studies, however, were accepted as a part of the required preparation for the university. And so it happened that many an excellent youth, tho fired with intellectual zeal by some of his high-school studies or teachers, and able to offer substantial proofs of intellectual strength and maturity, nevertheless found no thorofare to the university, save by turning back and traveling the old classical highway.

But of late there has come a change for the better. There is no doubt but that the recent action of Harvard College in enlarging the range of options in the list of requirements for admission to the course leading to the bachelor of arts degree will be followed by similar action on the part of many other universities. So the old classical highway is no longer the only road leading to the university; other good roads have been opened, and are now traveled by many. Preparation for the university and preparation for active life in the public high schools are not tasks so different nor so difficult of simultaneous accomplishment as once they were. Thanks to the labors of the Committee of Ten, the value of certain studies other than classical, as affording good preparatory discipline, has been recognized by the universities; and so it has become practicable to bring high-school studies into living contact with university studies at many new points.

In this way has university education been brought within reach of more youth, and of youth endowed with a greater variety of native talent. All this makes for the popularization of the higher education in the best sense of the word. The movement is essentially democratic.

The next great step in the popularization of the higher education will probably come in a very considerable enlargement of the courses of study in the public high schools themselves. Some branches hitherto taught in colleges, more especially those taught in the first two years of the usual college course, might well be taught in our high schools. In other words, our high schools might well grow to fill the place hitherto occupied by the colleges, while the colleges were encouraged to develop themselves into real universities. That is just the uplift which education in America most needs at the present time. Our public high schools should hold to our universities the same relation which the German *Gymnasien* and *Realschulen*, or the French *lycées*, hold to the universities in those countries. Until our high schools reach these European standards, and so become the direct feeders of universities, also not inferior to European institutions of the same kind, there will be desirable enlargements and improvements to be made in our public high schools. And the signs of this present time seem to indicate that the people will be ready and willing to enlarge and improve their high schools in this way, and to support their universities in leading the movement.

Consider now another great body of youth of high-school age—the boys and girls from fourteen to eighteen years of age who, having left the common schools with or without a knowledge of all the studies there taught, have no purpose to fit themselves for the university, or even to enter the high schools for the studies hitherto usually pursued there—what should public instruction do for them?

Here we enter a broad field which public instruction in this country has hardly more than begun to occupy. It is true, we have evening schools in many of our large cities for the instruction of adults and youth in elementary branches. There are also a few evening high schools and evening drawing schools. We have, too, whatever small beginnings have been made in the way of industrial education, a few industrial art schools, and a few manual training schools. But all these agencies are capable of great and useful extension.

To realize fully what may be done thru public instruction to promote the industrial and commercial interests of a nation, we must turn from the slow and inconstant operation of our democratic governments to the prompt and systematic action of the centralized governments of Europe. For about twenty years past the states of the German empire have been perfecting a system of commercial and industrial education, the effects of which are now apparent in a greatly increased foreign commerce and in a large output of industrial products that win a preference in foreign markets over similar products of French and English manufacturers.

These commercial and industrial schools have become very numerous in Germany; and their instruction touches every branch of commerce or industry in which any considerable number of people is engaged. They are usually started by trades unions under the encouragement of the government; and when success has justified their continuance in any case, the state usually assumes the payment of the teachers' salaries, and the town the cost of buildings and equipment. The fees, which are small, meet incidental expenses. These schools are not under the jurisdiction of the minister of education, but under that of the minister of industry and commerce.

If the United States were as well supplied with schools of this kind as Germany is, they would contain more pupils than do all our public high schools at the present time. Boston, for example, would have twenty such schools with four thousand pupils, Philadelphia forty-six with over nine thousand pupils, and other cities in like proportion.

The German industrial schools are not always nor chiefly given to instruction in the mere manual operations of the craft itself. These are often acquired in the workshops, where the pupils are already engaged as apprentices, their attendance at the industrial schools taking place evenings and Sundays. Here the pupils are taught the general principles of their chosen craft; and, in addition, the drawing, the modeling, the designing, the geometry, the physics, the chemistry, the economics, the æsthetics, the historic development, or the superior technical skill or knowledge of any kind which promises to make each craftsman more efficient, and therefore more valuable, to himself and to the community.

When England, a few years ago, perceived that industrial supremacy was passing from her people, and that German manufactured goods were rapidly displacing hers in foreign markets, she set on foot a parliamentary inquiry commission, and discovered that the one great cause of the recent commercial and industrial advance in Germany was the very thoro system of technical education which had grown up under the fostering care of the government. This system had been borrowed from France, where commercial and industrial schools have flourished for a much longer time than in Germany. England has not been slow to heed the lessons taught her by France and Germany. She is now developing a system of technical education which will soon be, if it be not already, inferior to none in Europe. Now, what lesson has the United States to learn from these European examples? When the industries of our country, no longer content with the home market, shall seek for a share of the trade in foreign markets, and so shall come into direct competition with the industries of Europe, they will require for their support, not higher protective tariffs, but more men and women industrially educated. The only sure protection of home industries, in the long run, is the protection afforded by industrial education.

But industrial advancement and supremacy are not the only ends that may justify the government in promoting industrial education. There is a worse national evil than the loss of supremacy or of importance in the world's marts of industry, and that evil is industrial ignorance. By industrial ignorance we mean not merely the illiteracy of working people, but the lack of such knowledge and technical skill as should make them resourceful and independent amidst the frequent revolutions in industrial conditions and methods which characterize the present age. Industrial ignorance is the prolific source of the idleness, the poverty, the misery, the despair, and the lawless violence which too often possess masses of unemployed wage-earners, and make them a ready prey of the scheming demagog or the willing hearers of the gospel of anarchy. Industrial education will remove, or at least mitigate, this social danger.

If it be asked, again, how far industrial education may properly be carried at the public cost by a democratic government, the answer is the same as before. The people in a free commonwealth ought to do no less for themselves than is done by monarchical governments for their subjects. As there are no limits beyond which public instruction in the so-called liberal arts may not be carried, save in the will of the people, so there are no limits beyond which public instruction in the industrial arts may not be carried. Surely a people that taxes itself to foster infant industries, and even to aid them when full grown, would act wisely in using some of its revenues to educate its youth for employment in those industries, instead of leaving them to be carried on by industrially educated foreign immigrants.

We have now passed over the ground covered by the higher and by secondary education. Debatable ground, at some points, it is admitted to be. Yet the aim has been to set forth those views of education which seem best entitled to prevail in a democracy.

Turning now to the education of young children, we may say, with general assent, that democratic principles require education thru this stage to be universal. To this end, public instruction should be both free and compulsory. During a certain period of childhood—say from seven to fourteen years of age—every child should be in school—in a private school if his parents so desire, otherwise in a good public school. This requirement should subject the parent to no pecuniary burden, but should compel him to accept the benefit of his child's education.

Public education is in no sense a charity bestowed by wealthy taxpayers on the children of their poorer neighbors. It is rather the best security the taxpayers can take for the safety of the very property out of which the taxes are gathered. No man having property, or the hope of any, can afford to take on himself, or on his descendants, the risks involved in the neglect of public instruction in the common schools. But not alone as a security for social order or for property values is the common school interesting to the wealthy citizen; it is the best place for the education of his own children; his own children will be irreparably harmed by being denied the privilege of going there. All this is easily admitted as a matter of theory; but there are difficulties in the way of its becoming the universal rule of practice. There ought not to be, but there are, people who permit themselves to cherish the notion that the public schools, tho good enough for the many, are not quite nice enough for their own children. They fail to realize what their children lose by growing up apart from the children whom they are to meet as fellow-citizens later in life, and out of the reach of those civic and patriotic influences which only a public school can impart. There are some words of the late Phillips Brooks, bishop of Massachusetts, spoken by him on the occasion of the celebration of the 250th anniversary of the Boston Latin School, which nobly express the true democratic sentiment on this point. He says:

> In the twentieth century, as in those that have gone before, our school will be a city school. Its students will find that enlargement of thought and life which comes from close personal connection in the most sensitive years with public life. Here, let me say again, is a blessing which no private school can give. . . . . Would that [this] blessing might be made absolutely universal! Would that it might be so arranged that once in the life of every Boston boy, if only for three months, he might be a pupil of a public school, might see his city sitting in the teacher's chair, might find himself, along with boys of all degrees and classes, simply recognized by his community as one of her children! It would put an element into his character and life which he would never lose. It would insure the unity and public spirit of our citizens. It would add tenderness and pride and gratitude to the more base and sordid feelings with which her sons rejoice in their mother's wealth and strength and fame.

There is another difficulty in the way of bringing all children of school age under public instruction, and that comes, not from the wealth or social exclusiveness, but from the poverty of parents. But the poverty of the parent must not be relieved by a sacrifice of the child's education. The law of compulsory attendance comes in here for the protection of the child, as well as of the community. The poverty of the parent must be relieved in other ways than by permitting the premature withdrawal of the child from school for the sake of the small wages he might earn. Then there are the unwilling and the careless or indifferent parents, whom the law should compel to school their children; and there are the morally weak parents, who need the law's aid in controlling their wayward and truant children. It is only by a thoro execution of compulsory-attendance laws that public instruction can be made to accomplish all that should be expected of it for all classes of children. The difficulties here encountered are growing daily more serious in our large cities; but so are the efforts put forth to overcome them growing more strenuous. Public opinion is awakening to the importance of the matter, and the outlook is encouraging.

One more grade of public instruction — that for children under seven years of age — claims a brief notice before closing. For a long time our people seem to have acted on the Spartan rule, that public instruction should not begin before the age of seven years. Up to that age Spartan children — or boys, rather, for we find no mention of girls — were left absolutely to the care of their mothers. This we must regard as fortunate, when we remember how intensely public their education was; for the boys were taken out of their homes and kept all the time, day and night, under the eye of public officials, who administered upon them the severest course of discipline known in the history of education. Perhaps many of our common schools of former days were of that Spartan type that made them unsuitable places for young children to be in at all. However that may be, we know that primary schools are quite a recent addition to our system of public instruction, and the kindergarten is still more recent. Moreover, the theory and practice of education, as applied to young children in a school, are of quite recent growth. This growth has been greatly stimulated, as well as guided, by the kindergarten of Froebel. The best reason for bringing the kindergarten into our system of public instruction is not that the school may thereby be brought as near as possible to the nursery, highly desirable tho this is for vast numbers of children, but that the kindergarten, by its constant presence and example, may inspire with its benign spirit the whole body of primary instruction.

We have now traversed the whole field of public instruction, from the university to the kindergarten. We have found that democratic principles require its support in all grades; that an enlightened democratic policy gives it a large scope; and that its limits are such only as the people may see fit to adopt. There is no sort of intellectual training, no useful knowledge, no profitable skill, which public instruction may not legitimately undertake to impart. It should go as far as an enlightened public sentiment can be found to sustain it.

And yet the great purpose for which a democratic government ought to do all this has not been stated in words, tho more than once suggested. This great purpose, above all others—including and controlling all others—is the education of the young citizen to good citizenship. And this is a moral purpose; for it aims not only to preserve the institutions of civil liberty, but, thru these, to help on the progress and elevation of the human race.

We well know that men may be intelligent, but not wise; may understand their individual rights, but fail to respect the rights of others; may be keen in the pursuit of private interests, but selfishly indifferent to the public welfare; may be restive under the restraints placed upon them, even by their own government, and yet unwilling to hold over themselves that control which makes governmental restraint unnecessary.

We learned long ago that universal suffrage, in itself, affords no guaranty of civil liberty. Nor does universal suffrage joined with popular intelligence give the desired guaranty. It was a highly intelligent people in France that used universal suffrage to ratify the *coup d'état* of Louis Napoleon, thereby subjecting itself to a corrupt empire, which ignored or injured its best interests for twenty years, and ended by plunging the nation into the most humiliating catastrophe known in modern history. To come nearer home, do we not see the intelligent voters again and again commit the amazing folly of submitting themselves to the absolute despotism of the political boss? Do we not see great cities and great states held in subjection by the power of organized corruption and plunder? The astounding betrayals of public interests are wrought by the voters at popular elections. They are wrought by men who can read and write; by men who can reason; by men who understand what are the highest interests of the community, but who choose, nevertheless, to serve their own selfish ends. The worst disease which now afflicts our body politic is political indifference. Spread among the people of our larger cities, it has already made our municipal governments a national reproach, and, if not stayed, will soon make them sources of national danger. The cure for this disease is not to be found in the exclusion of illiterate men from the voting body, nor in the application of reading and writing tests to foreign immigrants.

It is not more intelligence that we want, but more conscience; not more knowledge of the duties of citizenship, but a more patriotic resolve to discharge them. The great reason why a democracy educates its coming citizens, rich and poor alike, is that all may grow up under the obligations of conscience and patriotism to use for the public service those powers which have been fostered and matured by public instruction.

De Tocqueville said: "In the United States politics are the end and aim of education." His meaning is that every man has political duties; every man is a public man; and the supreme aim of his education is to fit him for the discharge of those duties, however high or however humble may be his part in public affairs. These duties are imposed on every citizen by the very forms of free government; and on the patriotic fulfillment of these duties rest the life and safety of free government itself.

Therefore, let Public Instruction meet the young citizen in the tender years of childhood; let her accompany him all the way thru the common school, the high school, and the university; let her impart to him all useful knowledge, all desirable skill; let her enlarge his mind for the reception of all truth, purify his tastes for the appreciation of all beauty, awaken and guide his aspirations toward all excellence; let her give him a knowledge of his rights as a citizen, and a disposition to maintain them; let her lead him to understand the equal rights of others, and to respect them; let her point out his duties to his neighbor, to his town, to his state, and to the nation, and inspire him with a purpose to fulfill them; and, finally, when she takes leave of him as he goes out into active life from the doors of the university, or of the high school, or of the common school, may she rejoice in having sent him forth with a heart grateful to the republic for having given him so gracious a companion, and filled with a high purpose to serve the republic so long as life may last.

DISCUSSION

McHENRY RHOADS, superintendent of schools, Frankfort, Ky.—Democracy and education—these two are so closely connected, so nearly allied in all relations, hat one feels himself on unassailable territory in asserting that one does not exist without the other, that the one has not existed without the other, that the one cannot exist without the other.

It may be difficult to determine whence comes the idea — the right of a people to govern itself thru delegates selected by itself. We may search for its beginning around the dikes of Holland, or in the woodland ceremonies of the ancient Teuton, or in the declamations from the tribunes of Rome, or beneath the blue skies of once brave and heroic Greece, and find only faint appearances revealing themselves in the forms of the governments studied. However fruitless may be our search for the beginning, the principle stands in full and complete operation today, as a fact; its embodiment, the American republic, being, perhaps, the most powerful exponent of the truth among the governments of the earth. What was an experiment is an accomplished fact, and a government of the people, by the people, and for the people is the result.

The restless and resistless passion for independence, for individual liberty, more than a desire to escape religious proscription and persecution, was the great moving principle that prompted men to leave their home and country on the other side of the ocean, and make for themselves and their posterity both a home and a country in an unknown world, on a principle which, as yet, had been but imperfectly understood and but partially tried. This spirit of liberty, more than all charters wrung from Saxon lord or Norman baron, became the propelling and controlling force in the formation of the governmental policies of the new country. The corner-stone of this government is that every man shall govern himself, and this is democracy. Broadly stated, the one is selected by the many, to conduct those affairs which pertain to other and more than the individual; hence the community, the state, the nation, each in turn, performing government functions which do not relate exclusively to the individual.

A government will be wise and liberal as those who administer it are educated in a broad and liberal humanistic sentiment. The framers of our national constitution realized this fact when they constructed that immortal document. Justice cannot be established by a people ignorant of the highest rights of man. Domestic tranquility cannot be insured by those who know not the duties of the individual to society. The common defense cannot be provided for by those who realize not who nor what should be defended. The general welfare cannot be promoted by those who are not devoted to the good of the whole people. The blessings of liberty can never be secured by those who know not the highest and truest meaning of that liberty which respects in every particular the rights of their fellow-man. Nor can these be perpetuated by any save those who realize the great aim of representative self-government and the ultimate destiny of life.

In the past, when goverment became more liberal and the right of self-government was meagerly doled out to the people thru the enlargement of the right of suffrage, it was given only to the best and most intelligent of citizens, and, altho we at one time extended this privilege to a class totally unprepared for its use, we set about correcting the possible evil results by educating that class in the right exercise of this privilege or duty by furnishing to them free education in an elementary way.

The pilgrims, who brought with them to this country an intense love of liberty, loved learning as well, and sought to extend knowledge as the only safe and sure bulwark of free institutions which they founded on virgin soil.

The author of the Declaration of Independence, that sheet anchor of faith in popular government, believed in the aristocracy of intellect rather than the aristocracy of wealth or ancestry. His biographer says: "The third great object of his life was to promote popular education as an essential condition to the safety of the republic." While he advocated unbounded liberty, he knew well enough that it would degenerate into license unless the people were informed.

During many centuries the exclusiveness of scholarly attainments was a matter of great pride. but now the universality of educational possibilities is not only the pride but strength of representative government. There is a great and noble ideal in the educational life of the present century. The theories of great educational reformers are bearing a bountiful, beneficent fruitage. The mutual and intimate relations existing between the political and intellectual life of the individual and nation are clearly discerned, and the prosperity and peace of the masses are recognized as essential to the prosperity and peace of the nation.

Our criterion of education is fixed by the end to be attained thru its agency. If the highest aim of education is to fit the individual for the enjoyment of the rights and duties of citizenship, and to enable that individual to get the most out of life, then he should be educated in all that pertains to the enjoyment of these rights and the fulfillment of thes duties.

He should know something of geography, for here he finds the natural causes which have helped him forward to his destiny. He should know something of language, for here he enjoys the pleasures of intercourse, and the delights of a literary life. He should know something of science, for here he sees the handmaid of man in his struggle for existence. He should know something of mathematics, for here he engages in those pursuits that enable him to subdue natural difficulties. He should know something of civics, for here he studies the rights and duties of man to his fellow, to his community, to his country. He should know something of morals, for here he is taught the highest duty of the individual on earth, and the hope of the hereafter.

If the state has a right to educate at all (and I hold it has), it has the right to educate in all those things which will, in the end, conserve both the highest interest of the person and the government to which he is subject — the individual and the nation.

It is not far from axiomatic to assert that every person must be allowed the privilege of enjoying the fruits of his own honest labor in any way pleasing to himself that does not interfere with the similar privilege of others, or is not detrimental to the general good of the social organization of which he is necessarily a component part. The relation of man to society necessitates that he fit and prepare himself for usefulness and enjoyment in life. The proper training of the individual "enriches life, deepens and broadens his own view of truth, ennobles his aims, strengthens his choice for the right, clarifies his vision," and in numerous other ways prepares him better for living.

There are those who maintain that the state, in educating its youth, fosters a spirit of paternalism which is, in itself, a destructive agent in national life. They reason that it is the business of the individual to educate himself, at his own expense, and as the result of his own effort. The value of individual effort is so great that some degree of plausibility attaches to their argument. They do not, however, seem to consider that popular and general education, altho conducted by the state, may avail itself of individual energy far more readily, and with better possible results, than the unassisted individual might ever be able to accomplish for himself. Moreover, the absolute necessity of an educated people is so apparent that the social organization is practically forced to direct the education of its members, in order successfully to perpetuate its own existence.

Again, there are those who hold that with the educational progress of the past half century crime has kept even pace, and have us infer, by a kind of innuendo, that the one was in some way connected with the other, if not its natural and direct progeny. They recite volumes of statistical information, talk learnedly of the percentage of crime to the population, and assert that the educational efforts of half a hundred years has not materially improved the condition of man in this regard. But the thoughtful student and investigator finds abundant cause for congratulation in his careful analysis of the supposed relation between education and crime. In a carefully prepared report on criminal statistics, an investigator of truth says: "Intemperance is a parent of a greater part of this crime, and 95 per cent. of it comes from uneducated homes." Another authority says: "There is a class of our children who receive no instruction, and from this class comes the bulk of our criminals." The National Reform Society, years ago, in one of its reports, estimates that from 3 to 7 per cent. of the population of the United States committed more than 30 per cent. of all its crimes, and that less than one-fifth of 1 per cent. was committed by those who were educated. In my own state, a late report shows that out of 561 prisoners received in the local prison only one man claimed to have a good education. After a careful investigation of this objection to popular education, I am forced to the conclusion that the objectors reason from false premises to conclusions equally illusive, and that their objections are as groundless as their argument is deceptive. They might find some cause for a part of the crime so prevalent in these degenerate days in a relaxed home discipline and insufficient parental control, which in turn begets a spirit of insubordination to regularly constituted authority and a complete disregard for legal restrictions. In so far as the school assists the home along this dangerous course, it is subject to the severest censure.

RICHARD HARDY, superintendent of schools, Ishpeming, Mich.—The city superintendent is confronted by two sets of conditions: the pedagogical, representing the direct management of his schools; the sociological, which has to do with the relations existing in his school and his community. From these arise all the problems that vex his soul, and with them he must deal when he takes up the subject of my discussion, "The most Important Problems to be Solved in the Supervision of City Schools."

Growing out of the first set of conditions are such problems as the course of study, educational values, preparation of teachers, grading of pupils, etc.; while from the second arises all the multitude of problems that must be met and solved before the school can be in perfect harmony with the community.

The educational world has thus far given its attention very largely to a consideration of the pedagogical side of the matter. This phase of education has engaged and engrossed us, and it is safe to say that never has an educational meeting given less than 90 per cent. of its attention to the purely professional side. This is undoubtedly as it should be, and yet it may be possible that we should have made even greater progress, had we given more thought to what may be termed the sociological side. We are deeply concerned in any movement that will further educational progress, and I believe that we are generally agreed that the schools of today suffer quite as much from inadequate equipments as from inadequate preparation on the part of teachers. It has not been a difficult matter to bring about the higher standards for qualifications for teachers, because the business world has felt that in such matters it would better not interfere, and for business reasons; but it has been a hard task to bring it to see the necessity for better equipment. And why? The community does not take the teacher seriously; it looks upon him as one who has to do with children and children's things. It rarely considers him as a business man, and it rides over him rough-shod when he tries to lift his views to attention. There must be some reason for this, and there is. It is because he is 90 per cent. professional and 10 per cent. business. It is because he has always preferred to be considered a school-teacher instead of the director and agent of the largest expenditure of a community. It is because he has always preferred the society of books to the society of men. If any care to make a practical test, select twenty-five of the best schools of the country, and then make an examination of the men at their heads. You will find them, very generally, men in whom the business sense has been developed; men who have studied the needs and demands of the material world, as well as of the world of spirit. You will find, too, that their schools are excellent because of their equipments, and this is due to the fact that the superintendents have impressed themselves upon their communities as business men. They have studied their communities, and understand their needs. If, then, this matter lies so near that of progress, it is highly essential that it be given our attention, and that superintendents give more of their time and thought to the demands of their individual communities. It must be borne in mind, too, that conditions are not always the same. The statement that a superintendent in a city of 10,000 has trials that are very like those experienced by one in a city of 200,000 may be true, and it may not. Hence there is not absolute truth in the assertion that what applies to the larger cities applies with equal force to the smaller municipalities. Every community has its own problems to solve, its own conditions to meet, and he is wise who early gives his time to them.

It has always been made to appear that an education that is best for one is best for all; that a preparation that is best for the children of the wealthiest and most cultured families of a community is also best for the children of the entire community. It is the old spirit of scholasticism, ever a powerful influence in matters of education. But must we be guided by this spirit? Are we to believe that the changed conditions of life are not to necessitate a changed condition in school management and school life?

For what is the school established? What is its purpose? It is my contention that the school is for the community and that it must keep the interests of the community ever before it. Do communities differ? Are they all alike in sentiment, in culture, in modes of thought and life, in occupation? Is there no difference between the school conditions of a New England village and a city whose population is largely of foreign birth and whose sole occupation is mining? Are there not different problems to be met with in these communities, and must not the school management be necessarily different? Every superintendent in a city of 100,000 knows that in some of his wards he must work upon an entirely different plan from that upon which he works in others. If these conditions are so varied, is it not reasonable for us to advance the idea that a supervising officer's first duty is to learn the needs and conditions of his community? As these differ, so must his provisions for his own school.

It is, then, very apparent that a schoolman's first and most important duty is to provide in the community the best school that he can for the boys and girls of that community. It is not to be taken for granted that, because some good results have followed the introduction of a certain policy in one city, similar results will follow its introduction in another city where conditions are very different.

I have in mind two cities of my own state that well illustrate the matter. One is the seat of our university; the other is a city of twice the size, but containing a population that is largely made up of people who are of foreign birth and who have not ideals of education that are very lofty. The one is a preparatory school for a great university; the other is a preparatory school for life. One holds before its students the necessity of so preparing their work that they may be able to meet the requirements of the various departments of the university; the other holds before the boys and girls the necessity of so working that they may become useful, honest, self-respecting, self-reliant men and women. One gives a splendid preparation in the languages and mathematics and other required subjects; the other has a splendidly equipped manual-training school and is making its work center about this department. One school will send its students into the professions; the other will send out mechanics and skilled artisans. Does not each fill its function? Has not each its place, and is not each equally entitled to our commendation and regard? How silly it would be for the second to make of his school a college preparatory school! And yet there is a strong demand that this should be done, for we are not yet free from the fashions in things educational. It is, then, of the greatest importance that a superintendent should be keen enough to see the demands of his community, and to work for them regardless of the criticisms that may be made by those who may be able to see but one side of a matter that has two very distinct and well-defined sides. It is a fact, also, that most of the children of a community are absorbed by it and become a part of its life. Their future homes are to be in the place where they receive their education, hence a new responsibility upon the part of the school to fit them that they may be of the greatest benefit to themselves and to their fellows. It must be the aim of the superintendent to learn, as far as possible, the requirements demanded for this best life. He must close his ears to the present cry for uniformity. There is too much of this at present. There is too little study of actual conditions. Uniformity is demanded in courses of study, until inspiration and individuality on the part of teachers are almost a thing of the past; uniformity in university requirements, until our high schools have become nothing but feeders for higher institutions of learning. There may be too much of it. There are fundamentals in the instruction of youth that must be regarded, but not every phase of education is a fundamental.

In conclusion, I would not urge that this view be set down as our understanding of the most important problem confronting the superintendent. It is, however, one of the most important, and it is gradually coming to larger attention. It certainly seems that there can be nothing of greater importance to us than the demands and needs of our communities. They give us our support, and to them we must look for our futures. How can the school be conducted for the greatest good of the patrons, the supporters, and the children? Let us keep in mind the diverse conditions that exist and the diverse demands of life upon all. Let us study our communities more carefully, more thoroly, and from the fuller knowledge obtained from this study we shall derive the power to make our schools of the greatest possible value.

CHARLES D. MCIVER, president of The State Normal and Industrial College, Greensboro, N. C.—Without faith and generosity it is impossible to be a democrat. On the contrary, a superficial view of one's environment, a little pride and selfishness, a little deification of tradition under the soothing name of conservatism, proclaiming as a religion the doctrine that "Whatever is is right," are the chief ingredients which go to make up a thorobred aristocrat.

That the wisdom of all the people is greater than the wisdom of a part of the people sounds mathematical and axiomatic, yet the practical adoption of this principle by individuals or governments requires faith of the mountain-moving variety. The average man, even among intense democrats, frequently betrays the weakness of his faith in the people by showing that he has more confidence in the wisdom of a small committee, of which he is chairman, than he has in the wisdom of all the people combined. Because of this weakness of our faith we are inclined often to give more attention to preparing men to serve on the small committees of life, so that they may manage the people's affairs, than we are to educating the people so that they may direct their own affairs, and so that their voice, which in theory is supreme, may be supreme in fact.

Thomas Jefferson stood alone among the fathers of this republic in his advocacy of absolute democracy and universal education. His first important act as a public man was the introduction of a bill, in the legislature of his state, for the abolition of slavery, and his second was for the establishment of a thoro public-school system. He wanted neither physical nor intellectual bondage in a democratic government, and while he never saw his ideas adopted in either direction, and while he himself died a slave-owner, yet his implicit faith in the people, and his unswerving advocacy of their education, will mark him forever as one of the patron saints of democrats and educators. It was while advocating his favorite doctrine of universal education that Aaron Burr exclaimed querulously at him: "What do you want to educate them for? They are hard enough to manage now."

And there are men today who, driven from Aaron Burr's position by the omnipotence of truth and time, are retreating as slowly as possible, and, under the guise of generosity and patronizing friendship, are saying: "I am willing to give them the three R's," or, "I am willing to give them a four-months' school term," or so many years of school work, etc.

In this republic, who gives the people anything? Are they not the government themselves? God speed the day when the public school shall have done its work and the people shall have come into their own inheritance.

The subject "Democracy and Education" suggests to me that we must have democracy in education. This means:

1. Teachers who believe in genuine democracy.
2. The source of revenue must be democratic.
3. The administration and application of the funds must be democratic.

1. Teachers should be men and women who believe, and have the courage and tact to teach, that every person has an inalienable birthright to a fair chance in life, and that no man or woman can escape labor of some kind without shirking his duty; that idleness is a crime, and the idler a moral vagrant whether he be tramp or a millionaire; that many of the greatest sins and the greatest blunders of government and society can be traced to the idleness of the rich and the ignorance of the poor; that every attempt at an aristocracy on any other basis than the golden rule laid down by the Great Teacher is a sham combination of selfishness and hypocrisy, and that an aristocracy founded upon the golden rule is ideal democracy.

2. I do not want to be misunderstood in what I shall say about the sources of educational revenue. I yield to no man in doing honor to those who have given of their means to endow educational institutions; but, if the people desire to have the scholarship of these United States in grateful sympathy with their own interests, I think that their safest policy will be to provide sufficient means to give every man and woman an opportunity for the highest culture in institutions supported by public taxation. I want my children to respect and honor the great educational philanthropists of the world; but I prefer that they should owe their education and their preparation for the battle of life to all the people, and, together with this debt, a feeling of obligation to repay all the people by using their powers so as to bless the world, rather than to owe this same debt and obligation to the best philanthropist that the world has ever produced. If the people are wise, they will continue to secure the grateful obligation of the trained intellects which direct public thought in any civilization.

3. There have been two very undemocratic methods of applying the public-school funds of this country. The lower public schools have for many years been open to all children, and a child with no education at all could enter them; but for many years only those people could enter the colleges and universities of the state who had been able, at their own expense, to secure the necessary preparation in secondary schools, unaided by the state or any other agency. A university open to all the people, but with no schools within their reach to prepare them for the university, is a sort of mockery from the standpoint of democracy.

But the most serious blunder, and the most remarkable one, is that for nearly a hundred years we have levied taxes and appropriated money for the support of educational institutions where only men could enter, and said to women that they must get their liberal education in their own way; that the state had no concern about it. This blunder had its origin in the undemocratic idea of education to which I referred in the beginning, namely, that education was to prepare leaders. The church educated churchmen as leaders, and the state educated statesmen as leaders. As it was impossible, under our conditions of thought and policy, for a woman to become either a statesman or a churchman, we naturally came to the conclusion that liberal culture was not for her. Of course, many sections of the country have outgrown this idea, and the best educational institutions of the country are opening their doors to men and women alike, and other states and sections are making annual appropriations to institutions for women, and are raising endowments for their colleges. But it is strange that we have been so slow to move in this direction. Our theory is that we no longer educate men merely for leadership, but for greater productiveness and better citizenship. The money invested in the training of a man returns an increased productiveness as a laborer. In other words, the dividend on the investment is material. The investment in the education of a woman, on the other hand, pays its dividend in kind, and results in the education of her own children and the children of others. In other words, the education of women propagates itself. The education of men generally does not. You cannot improve the civilization of any people except thru their homes and their primary schools. Homes and primary schools are made by women, and not by men.

The greatest problem in the education of the race today is the proper treatment of the white girl in the country districts of the United States. And let us remember that over half, largely more than half, of native American citizenship is still in the country.

When the United States government shall decide to make another appropriation from the land funds, it should be directed exclusively to the better training of all classes of women for the industrial warfare in which they are required to play so important a part.

If we want real, as well as theoretical, democracy, then our chief educational institutions must be of all the people, by all the people, and for all the people.

SOCIOLOGY'S DEMAND UPON THE SCHOOLS

BY J. F. MILLSPAUGH, SUPERINTENDENT OF SCHOOLS, SALT LAKE CITY, UTAH

Two basic elements enter into our conception of education: the first depends upon the possession, by every person, of certain natural powers, and is, therefore, by nature, individual; the second connects itself with the function of these powers in meeting the various requirements of life, and is, therefore, in large degree, social. The one is a necessary correlate of the other. Without the first, education would be impossible; without the second, it would be meaningless. Necessarily, then, attempts to build upon either foundation alone always will result, as they always have resulted, in a superstructure at once distorted, unsafe, and ill fitted for any valuable purpose.

Unfortunately, however, the influence of social forces in the evolution of society has not always been estimated at its true worth. Self-interest and ignorance have often combined to exaggerate the normal influence of the individual in human affairs, and to disparage the value of social union. The doctrine "Every man for himself," which, in case of primitive society, was the sole formula of success, has never been without adherents. Hence the trend of education has usually been in the direction of the enlargement of individual power, while its social side has been correspondingly subordinated. The ideal has been such development and training of the individual as would make him, as far as possible, complete in himself, independent, self-sufficient. Self-interest, rather than community welfare, has too often been the guiding principle of the race; resistance, rather than co-operation, too often the method of achieving success.

No thoughtful man can remain unconcerned while he contemplates the results of extreme individualism in society. They constitute the problems of today.

But there is dawning upon the world a consciousness that society is something more than an aggregation of individuals, collected and held together by chance. The studies of a few devoted men are slowly discovering to us the history and processes of social evolution. Gradually we are acquiring some knowledge of the laws which govern the relationships of men. We are coming to know that some of the influences which permeate society may, like many of the forces of nature, be analyzed; their causes, intensity, and effects determined, and, in a measure, their operations controlled.

As this department of knowledge enlarges and acquires greater reliability, its educational bearing becomes more important. In the light of the new knowledge we are beginning to see that education means more than the development of faculty; that with the idea of development and training we must associate the other idea of purpose—that purpose the achievement of manifest destiny in the common good of all. Our intellectual and moral powers vainly seek for interpretation, save in social relationships. Individual attainment is made possible only because of what society has been and now is. The educational process is but the coming into possession of that accumulated inheritance of knowledge and culture and achievement which registers the evolutionary status of civilization.

In its origin, conduct, and aims, then, the school is a social organism. Assuming the possession by the child of a certain stock of powers and capabilities, its mission consists in training those native gifts and in assisting the child to discover their meaning and purpose in the promotion of social ends. Hence it follows that, to the degree in which the school accomplishes this benign mission, its regulations, its discipline, its exercises, its agencies, its motives, must embody and illustrate the needs and aims and spirit of ideal community life.

That such views and practice do not obtain everywhere at the present time is unfortunately well known. It is not denied, to be sure, that the school, from its very nature, connects itself with a degree of social experience and training. The attritions produced by contact of numbers, the competitions of classes, the modifications of rights and duties produced by personal association and intercourse—all these are influences tending strongly to correct extremes of individualism and to develop knowledge of community relations. But these results accrue in spite, rather than in consequence of, our deliberate aim and purpose. Instead of permitting regulations to develop naturally as an outgrowth of the conscious needs of those for whose benefit they exist, we curtail our pupils' opportunity to acquire social experience by insisting that the teacher enact, interpret, and execute all the laws which have place on the statute books of the school. We are entirely satisfied when they respond perfectly to incentives, not of their own construction, and not even in harmony with their own ideas, but brought to them from without and held up to them for their enforced respect. Thus, I believe, many valuable life lessons are lost to the children — a loss for which there can never be adequate compensation. The interests of society, then, require a removal of all such artificial limitations upon the exercise of powers granted for beneficent purposes, and the establishment of such freedom as will permit the social forces, inherent in the school, to work out their rightful ends.

In like manner the interests of the social whole require that the *raison d'être* of the curriculum be explained on grounds of common utility as well as of mental discipline. Until the studies of our schools are felt by pupils to be a response to discovered needs, until their function is made evident by their solving some present problem, they fail to yield their fullest educational value. Illustrations of failure in the direction to which I refer are not far to seek. For example, language is pre-eminently a social instrument. Its study in the schools should be so directed as to make it subserve this interest. But this it accomplishes in a very imperfect degree only; the subject has usually been taught from the standpoint of scholarship, and its function as a school exercise has been regarded as disciplinary rather than social. Even such studies as literature and history and civics have been pursued chiefly for their culture value and for the satisfaction of scholarly curiosity. But when pursued in this way, however valuable the result, it is evident that these distinctively social studies miss their proper end, namely, a knowledge of society, the springs of its activities, the motives of its conduct, the sources of its control. Moral teaching also, as a rule, has aimed at a subjective effect, with comparatively little thought of its altruistic function. Teachers have too often encouraged emotional influences terminating in sentiment, rather than motor activities resulting in character. Sociology's interpretation of human relationships on their moral side finds its best expression in words uttered two thousand years ago: "He that seeketh his life shall lose it, and he that loseth his life shall find it."

It is the demand of sociology that manual and ocular training receive everywhere, as it now receives in many places, its proper recognition in the scheme of study. Not alone on utilitarian grounds is this recognition urged; but still more because without it the child can never adequately share in the experiences thru which the race has passed in reaching its present status of achievement. His education is thus incomplete at a point where the defect is vital — the point where, historically, physical, intellectual, and moral forces have found expression in the agencies of civilization.

The increased attention given to instruction in patriotism in the schools of this country is a gratifying evidence that the social function of education is receiving fuller recognition. But before this instruction can satisfy reasonable demands, as a force in large degree determining social welfare, the current conception of patriotism must be freed from some of its limitations. Love of the soil, pride in national achievement, homage to the flag, are all elements of patriotism; but they are not the whole of it. Our children need to be taught that, tho patriotism is sentiment, like all other sentiments it is empty and profitless save as it issues in conduct; that no bad citizen can be a patriot, that the noblest patriotism finds many forms of expression, all of which connect themselves in some tangible way with social well-being.

The limit of my time has been reached. I have been able only to touch upon some of the social aspects of instruction. It remains for me only to express the hope that such able presentation of the social bearings of education as have enriched the earlier portions of the present program of the National Educational Association may be repeated again and again, until we shall all come to know ourselves as units of a larger whole, whose status we each have part in fixing, and whose achievements are the highest register of our individual worth.

BETWEEN DAY SCHOOL AND REFORM SCHOOL

BY CARROLL G. PEARSE, SUPERINTENDENT OF SCHOOLS, OMAHA, NEB.

Our civilization has grown complex. The cloth for family garments, which was formerly grown, clipped, carded, spun, and woven at home, is now the product of many persons and many machines working in many places. So the processes of education have become similarly complex. The knowledge and training given in the home in the elder days are now given in the Sunday school, in the day school, by the music master, the drawing master, the dancing master, by the sewing school, the cooking school, the manual-training or the trade school—by many persons in many places. But complexity—the division of labor—has become the order of the day; and, since we have gone so far in this direction, I am going to enter a plea for a still further division of labor, and ask that two more cogs be added to the educational machine.

Where is the teacher who has not in her school a child, perhaps more than one, who is troublesome because he is in some way abnormal? The child is not criminal. He may or may not be vicious, but he is habitually troublesome. He may be truant to such a degree that he can make no satisfactory progress in his school work. The home influence is weak; or the boy cannot be reached by the influences which appeal to normal children. Instead of being truant he may be simply troublesome --turbulent in disposition, rebellious, or mischievous to an abnormal degree. Such children do more to exhaust the vitality and break down the courage of even the best teachers, many times over, than all the wear and tear of usual work, which is in itself sufficiently wearing. These children, too, are a nuisance to their school companions. They trouble and annoy the well-disposed children. The time of the school is taken up by "discipline" and in contests, in which the teacher, if a good one, is victorious, but at a wrongful waste of the time of the school and of her own power to do proper work.

For these cases a special school should be provided where they can be placed with children of their kind. The measures necessary for their government will not then be unjust to other children with whom they are. Teachers specially fitted by nature and experience for dealing with this class of children may be placed in charge of these schools, which can then be carried on with profit to the children and without undue wear and tear upon the instructors. Special care, too, can be given to the attendance of children in these schools, thru special truant officers. The knowledge, on the part of the children who have truant habits, that, if not present promptly, they will at once be sent for and, no matter where they may be lurking, brought to school and properly dealt with, will go far to get regular attendance.

Another class of children, no less troublesome to the schools because they are less frequently found in attendance there, forms a more serious menace to the community. These are the children who, because they have bad homes, or because they have no homes, will soon cross the line that separates them from the criminal class. These children are not thieves, but are in daily danger of becoming such. It is unjust, on account of their personal habits and qualities, to put them in the usual schools; nor can those schools do for these children what they need. Even the special schools spoken of before cannot provide properly for them. These children need not only to have their intellects instructed, but to have their lives regulated, until they can form habits of decency and usefulness. They ought not to be sent to reform schools, for these are schools for young criminals. No one who has spent any time in reform schools, or knows anything about them, would willingly incur the responsibility of sending to live with even young criminals children who have not entered upon that experience.

For these children must be provided a school which shall be at the same time a school and a home; where their time of rising and of retiring, their hours of work and of study, shall be regulated, and even the hours of recreation, so far as necessary, shall be supervised.

In such a school, with proper food and clothing, with firm and judicious management and instruction, they may acquire regular habits, as well as intellectual development and a training in the useful arts of life.

When the state feels the responsibility for the establishment of such schools instead of permitting these children, as now, to become confirmed in their truant and vicious habits, a very considerable stream which now feeds the idle and vicious classes in the community will be, in a large measure, dried up.

THE PROPER EDUCATION OF AN AMERICAN CITIZEN

BY G. N. GRISHAM, A.M., PRINCIPAL OF LINCOLN HIGH SCHOOL,
KANSAS CITY, MO.

When the present French republic was engaged in a great political duel with imperialism, Gambetta, the leader of republicanism at the time, announced as the policy of his great party "universal suffrage, based upon universal education." It was this policy that inspired France and gave her that unity of feeling and purpose that lies at the basis of the most stable and satisfactory government which that nation has had since the passing of the ancient régime. At the time when this policy was announced, we had witnessed the adoption in our own country, not as the policy of a party, but as the settled practice of our nation, universal freedom, universal citizenship, and universal education. We stand by that policy today, with no intention of departing from it. The spirit of education is the most intense that any people ever before presented in the history of the world.

However, the educator of today feels somewhat hampered. Side by side with the earnest, intelligent worker is the educational quack, who, while profiting by the educational enthusiasm of the age, casts discredit upon every serious endeavor. And, naturally, there are critics. They dare not oppose the settled policy of the states and the time-honored convictions of this nation with Herbert Spencer's arguments against state education; but they insist that the cost of education is frightful; that the results are not what they should be; and that our educators go too far in offering secondary and university training free of cost to the recipient.

The quack will be driven from the great centers of population to remote corners, to escape the intense light emanating from this great association. The educator is justified in turning directly upon the critics. Admitting that he falls short in results, he makes no apology, but relies upon an enlightened public opinion to favor even greater expenditures of money to give to the American nation better citizens and better leaders. The responsibilities thrown upon the American citizen are too great to be borne by ignorance, or even narrow intelligence. We have all seen men who knew too little, but none that knew too much, to understand and do the duties which society has a right to demand. The education of a person has both a social and an individual side. It has a value to the many as well as to the one. For the individual, education is an absolute necessity as a means of affording the requisite knowledge and training to enable him to make a satisfactory adjustment of life conditions. The more complex and the more advanced the social life, the greater is the demand for intense preparation. The child in the civilized state requires more to be done for him than does the child living in primitive conditions. The citizens of a republic demand more training than the citizens of a country under monarchical rule. Social progress makes the struggle for existence more intense; yet this is not a sufficient reason for offering liberal culture to all citizens. True it is that the individual does not exist for the sake of society, but, as De Maistre tells us, "society exists for the sake of the individual." But that is the best society which by its constitution makes possible the existence of the largest number of the best individuals. If society needs every person at his best, then society is concerned in calling forth the best there is in every person. It is for this reason that the state, standing as the sole representative of society, sees its needs, codifies its thought, and executes its will in behalf of the individual who may in course of time prove helpful or hurtful.

There are those who urge that our country is encountering certain perils which can be evaded only by the greatest precautions. But why speak of the perils of a young nation like ours, now for the first time conscious of its power, conscious of its manhood, conscious of its noble inheritance of principles and memories, conscious of a great past and greater destiny? Rather speak of the problems for whose solution intelligent provision must be quietly made.

First and foremost stands the general problem of self-preservation and progress. It is one problem, but presents two phases. In one act every organism provides for both nutrition and growth; similarly, society provides for simple existence and that peculiar mode of existence called progress. In this country we shall never be satisfied with simply balancing the constructive and destructive tendencies in social life. We live to lead a larger life, the fullest and completest known to man. Every new generation without preparation for the exercise of its rights and the performance of its duties is the antagonist and possible destroyer of all the best products of thousands of years of human thought and endeavor. Society must save itself from this ever-present foe. Our institutional life cannot be floated along nature's strong blood current of heredity, but must seek an artificial channel all its own, and must reach each new generation thru the schools which interpret and sustain civilization. Thru them alone can we hope to comprehend the present by studying the past, and guarantee the future by properly using the opportunities of the present. Thus do we hope to check the desire for change by a just conservatism, and, while recognizing and eliminating the evils that vex us, steadily and faithfully maintain the good that has been achieved by the race thru all its perilous history from barbarism and the rule of tyrants to enlightened liberty. Our nation is justly proud of what she has done for mankind. Nor shall we be satisfied to occupy any inferior position among the peoples of the globe. America is ambitious to offer mankind the most exalted ideals and the highest realizable good. So far she has enlarged every idea and broadened every institution brought from Europe. The press came, but with freedom of thought; religion came, but with universal toleration; the state came, but with universal freedom; education came, but as the one common good, accessible to all the people alike. We take the position that there is nothing that is good for man that may not be shared by all men. To maintain a civilization so rich and so liberal must demand for all the broadest culture possible among men. In the great and honorable rivalry for progress, the state must justify her right to live by doing the most for the individual, and engage in tasks of advanced research upon problems out of the range of private investigation.

The strength of a nation lies in the intelligent devotion of a satisfied people. Those who lead and those who follow will be more effective in their necessary relation if conscious of equality of privilege and confident of the justice of society in offering advantages. The state should, therefore, create universal opportunity, and instead of attempting to classify men by the opportunities offered them, rather let men classify themselves by the use they make of their opportunities. Our schools have been undergoing a rapid centralization and steadily improving in the process. One more step should be taken. Our national bureau should have greater reach and greater authority, and our various state systems should be but so many expressions of one definite national aim. We should at least have a national university, backed by the resources of a great people, for training every kind of capacity that our civilization demands.

Next to the creation of great life conditions is the safe transmission of the same to posterity. In our national defense schools and colleges rank in importance above forts and batteries and ships of war. We cannot afford to overlook the fact that our nation is confronting a problem of national unity, threatened by multiple causes. There is need of unity of thought and feeling to diminish friction and guarantee those victories of peace which the modern world has learned to praise. With our rapidly growing population there is a visibly larger anti-social element requiring an ever stronger hand to hold it in check. Our rising standard of civilization causes this element to multiply more rapidly than the general population. Withal, capital and labor, employer and employee, are ever clashing, and more than once in the last twenty-five years have their quarrels reached national proportions. Besides this clash of classes in their war of an imperfect industrialism, with the frightful ulcers of need and greed for our people to contemplate, there are difficulties growing out of the imperial domain of our republic. We are a unit today, sustaining the cause of a young republic in the name of liberty and humanity; but, when this matter is settled, we shall be compelled ere long again to consider and harmonize the jarring interests of an agricultural South, a manufacturing East, and a mining West. Nor can we forget that all these difficulties are made greater by the fact that our population is made up of fragments of nationalities taken in no inconsiderable quantities from the extremes of humanity; men who come from the bitterness of oppression to the enjoyment of a freedom they do not fully appreciate; men who must learn duties as well as rights, who by their very distance apart engender jealousies fruitful of discord and strife. The strength of the nation calls for the welding of all these elements into oneness. The best unifying principle we know of is education. There is nothing in the mind of any human being antagonistic to the institutional life of the best civilization that needs survive the training of a first-class school. Besides, lines of prejudice, whether national, racial, or sectional, lie parallel with other lines of real or imaginary interest, and can be erased only by intelligence. Where the vision is limited, imagination often constructs ghosts that cast discredit upon human reason. To dispel these there is need of light.

Let it not be supposed that this great task can be accomplished by knowledge alone, tho men, of whatever intentions, do need intelligence to distinguish between remote and immediate interests, between accessible and inaccessible good, and, more than all, to see the identity of their own real interests and those of other men, in the same community. But this kind of knowledge would be of small value unless education take on its double phase of intelligence, reinforced by clear, moral ideas. We are already strong on the knowledge side. We need to be just as strong on the character side, to the end that men may have self-control, a keen sense of justice, respect for authority, and as strong a disposition to halt at the boundary of their rights as to stop others about to trespass.

Our nation has a great future. She will continue to march in the van of nations. She will continue to be the inspiring ideal of people struggling for liberty and light. She will exalt man by subduing nature and softening the asperities of the life-struggle. But, in view of the problems that confront us, preparation must be made for the intelligent action of public opinion at critical times, by laying the lines of our culture broad and deep. It must be our policy (1) to have a good school within reach of every child; (2) to have every child in some school under competent instructors; (3) to provide for adequate moral as well as intellectual training; (4) to maintain higher institutions of learning, to preserve the strength of the lower, and at the same time guarantee that advanced statesmanship which, in the framing and enforcing of all legislation, will inspire all classes of our complex population with the fundamental sense of fairness and justice. Education is a lever of great length, great strength, and enormous power to lift the masses of mankind. With national intelligence and national manhood, we may not only be sure of solving the general and special problems that face us, but we may count on inspiring the respect of all nations for the great republic of the new world.

THE SCHOOL OF THE FUTURE

BY DR. A. E. WINSHIP, EDITOR "JOURNAL OF EDUCATION," BOSTON, MASS.

This audience will pardon me if there is no attempt to be profound. These heroic men upon the program have come to you one after another with profound truths, and you have not cared a picayune for anything they have said; and if you did care to know what these wise men think upon these great questions, they have too little time to give a sample even of their hopes and fears, their convictions, and their judgments. It is a strange commentary upon the situation that these men who have spoken wisely and well upon themes in which we have a common interest have appealed to you less than these musicians who forgot their classic music and indulged in a merry bit of medley, in which even the echo of the cornet was more inspiring than all the philosophy and oratory of the platform.

"The School of the Future"—what a topic to speak on, while you still cry out for more of the fun and frolic of these instruments! The only excuse for speaking of tomorrow today is the fact that today gets all its emphasis from being either the yesterday of tomorrow or the tomorrow of yesterday. The school has never done its best work when the schoolmaster has been content to round out the labors of the past. Without in the least forgetting that feature of our work, we must address ourselves as never before in making the school of today focus itself to become the yesterday of a more glorious tomorrow. This meeting, with its ten thousand teachers, will be of profit to the municipalities in which we labor, and thru them to our land, only as it shall prove itself the yesterday of a more intense and vigorous tomorrow.

There is time merely for a few suggestive sentences, with no attempt at explanation or development. The schools that deal with children in the mass, the elementary schools, as we speak of them, must not become lifeless thru undue reverence for logic, but must be alive and vibrant thru information which satisfies the passion for knowledge, which was never so keen as today. Not only does the geography of the world change without warning, but science, and even philology—yes, history and literature—take on new phases in an hour, without so much as saying, "by your leave." There was a time when the knowledge of the fathers was all-sufficient for the children, but in this age, and infinitely more so in the future, the boy must be the father of the man behind him rather than of the one that is to come after.

The school of the future must be interesting. All the world appeals to our boys and girls. The field of sport in spring, summer, and autumn; the daily paper, with its millions invested in tantalizing active minds; the magazines, that are already threatening to become universities as well as libraries, will make it impossible for the schools to hold the attention of the children and youth to intellectual discipline, unless they match the money and genius of outside attractions with features of scholarship and training that command their attention and respect. The day of the truant officer and the rod as schoolroom attractions will soon pass away.

The school of the future will be imperial. This is a popular word just now. It has the fiber of Manila in it. Three months ago the world had little respect for our navy, and we had less. Today our navy has the admiration of every nation, with Spain leading the bowing hosts. The American school has made the American navy. Not a man on one of those ships occupied a post so humble that he had not a fair education. The American school had laid its hand on every one of those boys; and the eye that aimed the gun, the hand that held the wheel, the arm that heaved the coal, had behind it the American school.

Four hundred years ago the Spaniards promoted the discovery of the new world, and then gave the discoverer a taste of Spanish cruelty. Nearly three hundred years ago England began her conquests in the new world, and Englishmen and their American descendants went from conquering to conquer, with vast areas ever ready for the ambitious and the restless. Two years ago it dawned upon these men of the far West, who had known no limit to their inheritance of territory since the days of John Smith and Governor Bradford, that there was no more land for them to inherit. Startled by the impossibility of going farther west, they surprised the East by a sudden countermarch. The feeling of the East can be better imagined than described. Now a merciful providence has suddenly opened the Atlantic and the Pacific, saying to all restless Americans—and this seems to include us all—"Enter in and inherit the sea, and the islands thereof."

These events that are transpiring, with so much that is tragic and comic, teach us that the schools themselves must be imperial. We have already proved that we have the best navy and the best army in the world. We will soon prove that we have the best statesmen. We have the best genius in inventions. We must not stop until we show the world that we can develop the best artists, as well as artisans, the best sculptors and musicians, the best philosophers and poets. The call is for the school of the future to enter in and possess the earth and the fullness thereof.

THE LARGER UNIVERSITY IDEA

BY DR. ELMER E. BROWN, UNIVERSITY OF CALIFORNIA, BERKELEY, CAL.

We have seen in recent days a strange phenomenon — the universities have become popular. Never before have the doings and happenings within college walls commanded such general interest. This is the age of university expansion; the age of great university builders. I wish to say a word as to the significance of this university era.

It seems to mean, first, that our American universities sustain a peculiarly close relation to our American life; and, secondly, that their highest prosperity depends upon fidelity to that relation.

Our universities come close to the American public because they come close to the public schools. In European systems the primary school which leads to the university is not the primary school for the common people. Here we know nothing of a primary school that does not lead to the top. Every child in our common schools, we may say, is started toward the university; and so far as he goes he is on his way to the higher education.

Every teacher in the common schools is fitting for college. The work may be well done or ill, but it cannot be fairly judged by itself apart. It points to the higher learning and to the highest. Great numbers of our teachers recognize this fact and are taking all pains to put themselves in line with university ideals. They do not rest content with the mastery of mere "school sciences." They seek to know real sciences. The teaching of the elementary schools must be such as shall stand the highest tests of truth. We may glory in the fact that our teachers show great hunger after real knowledge, and think it a shame to offer their pupils less than the best. The kingdom of knowledge suffers violence; the teachers of the common schools take it by force. They stand at every gateway of learning and cry: "Teach us, that we may know."

I believe I have not overstated this strange and inspiring fact, which is coming to pass before our very eyes. In such ways as these the American universities are drawing near to the American people, and the American people are drawing near to the universities.

This university era means, in the second place, that our American institutions of learning have an opportunity it behooves them not to lose. The future belongs to the university which shall realize the full unity of American education. Here is the larger university idea. The future belongs to that university which shall make the primary school and the secondary school parts with itself in the larger university, wherein dwells liberty.

This larger university is not to be attained by subordinating the lower schools to the immediate purposes of the college. No greater mistake could be made. The problem of unification is as delicate and difficult as it is inviting. It calls for intimate knowledge of the present condition, the functions, and the capabilities of the lower schools; it calls for a broad comprehension of the means and ends of higher education. The lower schools must be uplifted; the higher schools enlarged. Lower and higher must be firmly knit together; but the relation must conserve the freedom of the schools. The higher schools must not be held down unduly by the lower; and the demands of the higher upon the lower must be guided by knowledge and sympathetic appreciation. The desire to keep open a clear way from the lowest schools to the highest must not be allowed to hamper the development of technical education at such nodes of the scholastic course as the public good may require.

The larger university is a tree of knowledge. It has a strong central trunk of liberal culture, running from its root up to its topmost tip, like the trunk of a great pine tree; and it has many branches of industrial and professional training, which bear fruit in the several occupations of human life. The branches have need of the trunk, and the trunk has need of the branches. How can you hope to perfect any part in separation from the whole?

If this is a true view of the university, it follows that one chief function of university pedagogy is to promote the organic integration of all the schools. It must see each part of our public education in the light of all the rest, and in the light of all related institutions. It must concern itself with the politics of education. Our schools have suffered enough, as everyone knows, from partisan politics and from personal politics. But the best remedy for politics of the baser sort is politics of the higher sort. If practical politics are bad, so much the greater is the need of sound political theory. And I know of no more inviting field of political inquiry than that which has to do with the relation of part to part in our systems of education, and with the intrinsic relation of the schools to the state, to the church, to industrial and civil society. Here we have the larger university becoming truly conscious of itself in a university subject of the highest interest.

Teachers of whatever grade of school have everything to gain and nothing to lose from this larger view of the university. It is always good to realize our oneness with a greater unity. And then it is good to find the broad lines of limitation with which each human institution is surrounded. I can think of no nobler study for any man than to find his place in the great struggle that is going on in the world. I can think of no nobler study for any body of men. We know we are for Ormuzd. We know we are against Ahriman. But where is our company; where is our corps; what is our part in the fight; where are our immediate allies? We seek for unity, because it is our nature so to do. We expect our little work to be a constituent part of some great, all-embracing work. We shall never rest content till we be assured that we are building some little part of the city of God. And we cannot doubt that some great responsibility for such building rests with the larger university.

Memorial Addresses

Constituting the Report of the Committee on Necrology for 1898

EDWARD AUSTIN SHELDON,	Oswego, N. Y.
BIRDSEY GRANT NORTHROP,	Clinton, Conn.
MRS. REBECCA D. RICKOFF,	New York, N. Y.
SAMUEL MARTIN INGLIS,	Springfield, Ill.
J. C. GILCHRIST,	Laurens, Ia.
MRS. SUSAN GIVEN PATTERSON,	Union City, Ind.
COMMODORE PERRY ROGERS,	Marshalltown, Ia.
WILEY T. POYNTER,	Shelbyville, Ky.
JOSEPH C. JONES,	Chicago, Ill.
JOHN H. TEAR,	Chicago, Ill.
SOLOMON PALMER,	East Lake, Ala.
WALTER S. PERRY,	Ann Arbor, Mich.
EUGENE D. BAGEN,	New York, N. Y.
HENRY WOLCOTT BLAKE,	Springfield, Mass.
EDWIN AZRO CHARLTON,	Broadhead, Wis.
WALTER M. JAY,	Salina, Kan.

The following names of deceased active members of the association, concerning whom reliable data for memorial sketches could not be obtained, appear in the report of the committee:

N. B. THOMPSON,	Waterville, Kan.
L. A. GRAY,	Portland, Me.
GEORGE R. FOWLER,	Boston, Mass.
ANNA A. CUMMINGS,	Buffalo, N. Y.

HENRY SABIN, *Chairman,*
E. E. WHITE,
W. E. SHELDON,
A. R. TAYLOR,
E. C. HEWETT,
Committee on Necrology.

Dr. Edward A. Sheldon

[PREPARED BY W. E. SHELDON]

The death of Dr. Edward Austin Sheldon, for thirty-five years principal of the Oswego (N. Y.) Normal School, and for thirty years an active member of the National Educational Association, removes from the educational world one of the most devoted and successful pioneers of progressive ideas in elementary instruction.

Dr. Sheldon was born at Perry Centre, Wyoming county, N. Y., October 4, 1823. For three years he supplemented his thoro elementary education as a faithful and earnest student at Hamilton College, and, altho he did not graduate, subsequently received the degree of A.M. from that institution. On leaving college he entered at once upon his life-work as a teacher. His success was such as to give him unusual prominence, and won for him the position of superintendent of schools of Syracuse, N. Y., and later he was chosen to a similar post of responsibility and honor at Oswego, N. Y. He was a genuine disciple of Pestalozzi, and for more than forty years was a foremost leader of the group of great educators who introduced and defended progressive ideas in the American public schools.

So deeply impressed was he with the importance of improved practical methods in the elementary grades of instruction that, in 1861, he organized a training school for teachers, and arranged and published a systematic course of objective instruction which attracted great attention from all earnest instructors of the young. His system and course of instruction were adopted by the normal schools of the state of New York, and also by many institutions in other states of the union.

In 1862 he was chosen principal of the Oswego Normal School, which position he filled with distinguished ability until his death. In the early history of his professional work in the normal school he had to face and overcome much persistent opposition. He was richly rewarded for his great struggles for the principles and methods he advocated and applied. His success was so marked that the Oswego Normal School became a sort of "Mecca," and attracted to it from all parts of the world thoughtful educators to study and observe its work. It also brought to it enthusiastic students from all sections of the country.

Dr. Sheldon's marvelous influence and power with children and students arose primarily from his great and generous heart; from his comprehensive knowledge of, and his deep and full sympathy with, the nature of children. He understood their needs and adapted his methods of instruction to help them.

Like all born educators, he loved the young, and aimed by example and precept to inspire them with a desire to acquire knowledge, and pointed out to them the methods of acquiring it that would best develop their minds and hearts and contribute to their enjoyment in the pursuit. He had almost a magic power to win the confidence of his pupils and stimulate them to do their best work.

Dr. Sheldon's abounding kindness of heart; his unselfish devotion to personal and public duties; his charming modesty; his genuine and sincere desire for the welfare of all who came within the sphere of his acquaintance, combined with strong common sense, discretion, and tact, equipped him to mold and guide young teachers as few men have been enabled to do. So winning and persuasive was his manner of dealing with his associates and pupils that it was a common thing for them to speak of him as "Good Father Sheldon." In later years, at the meetings of the national and other educational gatherings, he was usually surrounded by a group of his graduates, who loved and honored him.

Not only was he eminent as an educator and organizer, but he occupied the position of a successful author of schoolbooks, reports, and papers on educational topics that will perpetuate his memory. In private life his influence was felt in promoting the happiness and well-being of family and friends. A true Christian gentleman, an exemplary, patriotic citizen, passed away from earth when he died August 26, 1897, peacefully, and with almost no premonition. We shall miss him from the activities of his busy life, and feel that another beacon light has ceased to shine and send its beams forth to warn and guide. Reverently we say in the words of the poet:

Good rest to the gray head and tired feet
That walked the earth for seventy steadfast years.
Bury him with fond blessings and few tears,
Tears only of remembrance, not regret;
On his full life the eternal seal is set.

Rev. Birdsey Grant Northrop, LL.D.

[PREPARED BY EMERSON E. WHITE]

Rev. Birdsey Grant Northrop, LL.D., was born in Kent, Litchfield county, Conn., July 18, 1817. His boyhood was spent on the farm, but he early desired to follow the example of his grandfather, Amos Northrop, who graduated from Yale College in 1762. He prepared for college at Ellington, Conn., and was graduated from Yale in 1841. Four years later he graduated from Yale Theological Seminary. He taught school several terms, while pursuing studies. After graduating from the theological seminary, he was pastor of the Congregational Church at Saxonville, Mass., for ten years. His earnest and intelligent interest in the improvement of the schools of the town, while pastor, attracted the attention of the Massachusetts board of education, and in 1857 he was appointed agent of the board, and, for ten years, he filled the office with marked efficiency and acceptance.

In 1867 he was called from this position to be the secretary of the board of education of Connecticut, his native state. He filled this important office with great ability for nearly sixteen years, and his labors resulted in a much-needed improvement of the schools. He was tireless in his efforts to arouse public interest in school progress. He held teachers' institutes and educational conventions in the different towns and cities, furnished the leading papers with school information, and enlisted the colleges and academies in the improvement of the common schools. During his administration legislation was secured against the employment of young children in factories and stores, the rate fee was abolished and the schools made free, the school term was lengthened, and the qualifications of teachers raised. Dr. Northrop also gave special attention to methods of instruction and discipline, the improvement of schoolhouses, and the beautifying of school grounds.

His efforts to suppress the sale of bad literature were as heroic as they were successful. Not content with the suppression of the sale of bad books, he disseminated needed information concerning good books, and earnestly promoted the establishment of town and district libraries. The results of these efforts were most beneficent.

Dr. Northrop retired from the office of secretary in his sixty-sixth year, receiving the high commendation of the state board for his important services.

In this quarter of a century of successful school administration, he had also won a high and honorable place among the educators of the country. He was president of the American Institute of Instruction in 1864–66, of the National Superintendents' Association in 1866, and of the National Educational Association in 1873. He was one of the board of visitors of West Point Military Academy in 1863–64; was one of the original trustees of Smith College; and for some years was a trustee of Hampton Institute, Va. In 1872 Williams College honored him with the degree of LL.D.

During the remarkable transition in Japan, Dr. Northrop became deeply interested in the educational movements in that empire, and members of the Japanese embassy opened negotiations with him to go to Japan to inaugurate the proposed system of public education. These negotiations did not issue in his undertaking this great work, but he accepted the guardianship of the Japanese girls who came to this country to be educated, and had also the supervision of the education of most of the Japanese young men, as well as of many Chinese youth — a responsibility which he cheerfully assumed and which he met with praiseworthy fidelity. It was largely thru Dr. Northrop's efforts, continued for nearly ten years, that Japan received the Shimonoseka idemnity from the United States.

In grateful recognition of these and other unselfish services, the Japanese government presented Dr. Northrop with a costly set of china, and, on the occasion of his visit to Japan in 1895, received him as the guest of the nation. A reception was given him at Tokyo, attended by official representatives of the empire, and by many leading citizens. The addresses delivered by Marquis Saionji and Mr. Kanda, who spoke on behalf of Japanese students in America, expressed the highest esteem and gratitude.

A noble and characteristic incident in Dr. Northrop's visit to Japan was his successful efforts to secure the release of Captain Choy Ting Kon, the leader of the Chinese torpedo fleet, who was captured by the Japanese and held as a prisoner at Osaka. Learning that Captain Choy would be put to death if returned to China, Dr. Northrop pleaded for him before the Japanese officers, and he was secretly permitted to escape. The letter of the former Chinese student in America to Dr. Northrop on his release is a most touching expression of gratitude. "A father," says Choy, "could not have done more for his son." While in Japan, Dr. Northrop delivered in various places, chiefly in colleges and schools, some forty addresses. He was everywhere recognized as a benefactor of Japan.

The closing years of Dr. Northrop's life were devoted to the improvement of American homes, and for this noble service he will doubtless be most widely remembered and honored. "It has long been my desire," he wrote at four-score, "to help improve the homes and home life of the American people. In every land the homes of the people tell their condition. The wigwam means savage life."

He early took a deep interest in tree planting as a means of beautifying villages and towns; and, in 1877, he visited Europe officially to examine, not only its industrial schools, but especially its schools of forestry, and the experiments in progress for the reclaiming of waste lands by tree planting. He returned with a fund of valuable information, which was made public in his annual report, and later in a volume entitled *Forestry in Europe*.

He was quick to recognize the value of "Arbor Day," which, at the suggestion of Hon. J. Sterling Morton, had been adopted by Nebraska, and to Dr. Northrop more than to any other man belongs the credit of its wide adoption by other states. In 1876 he started the scheme of a "centennial tree planting," which spread across the country. At the meeting of the American Forestry Association in 1883 his resolution in favor of Arbor Day in schools, already celebrated in Cincinnati and several other cities, was adopted, and he was appointed chairman of a committee to push the movement, and has been reappointed every year since. Arbor Day has been adopted in nearly all the states and territories; also in Canada, Australia, several European countries, and in Hawaii and Japan. Millions of trees wave their banners of leaves in honor of this eloquent apostle of tree culture.

It should be added here that Dr. Northrop's objective point in the advocacy of Arbor Day in schools was the beautifying of school grounds and the homes of the people. He took little interest in showy celebrations of the day that left the school premises treeless and barren. Arbor Day was but a factor in a larger movement for home and village improvement.

The last fourteen years of Dr. Northrop's life were largely devoted to village improvement, in which he had been long interested. His model in this beneficent work was the pioneer society of Stockbridge, Mass., which had made the town famous. In advocacy of village improvement he visited over forty states and territories, and thru his labors hundreds of "village-improvement societies" have been organized, and scores of villages and towns have been greatly improved. His zeal in the good cause was unabated at four-score, and his last illness is attributed to overwork and exposure in a series of lectures in the South.

It must be added that Dr. Northrop's entire public service was inspired by high ideals of human life and an abiding faith in the possibility of an indefinite improvement of the moral condition and happiness of the race. He saw in the humblest child large possibilities of growth and service; and the home, the school, and the library of good books stood for opportunity and helpfulness for children. The rights of childhood were to him sacred and inviolable. This made him a civilizing force, and the movements he set in motion will live after him.

He wrote several books, including *Education Abroad*, *Forestry in Europe*, and *Lessons in European Schools*, and numerous pamphlets and tracts. He was also a frequent contributor to educational, religious, and other papers.

Dr. Northrop was married in 1846 to Miss Harriette Eliza Chichester, and their home life was happy and beautiful. The writer well remembers the first time he was a guest in their New Haven home before the sad death of a promising son. Mrs. Northrop died February 20, 1892, and Dr. Northrop passed away April 27, 1898, his death resulting from heart disease. Two children survive — Harriette, wife of Principal Dwight Holbrook, of Clinton, Conn., and Henry E., professor in the Brooklyn Polytechnic Institute.

Mrs. Rebecca D. Rickoff

[PREPARED BY MISS BETTIE A. DUTTON]

Died January 4, 1898, at her home, 374 Central Park West, New York city, Mrs. Rebecca D. Rickoff. Buried in Cleveland, January 20.

Among those who have passed from our membership within the year is Mrs. Rebecca D. Rickoff, since 1880 a life member of this association. This tribute must necessarily be too brief to allow any full mention of those qualities of character which endeared Mrs. Rickoff to her friends and made her a valued member of this body.

We can only trust that it may be helpful in recalling to those most familiar her most stimulating educational work, and in suggesting to others some of those forces which gave value to her life.

Entering the school before she was five years old, she completed the course of study in the schools of Cincinnati, graduating from the Hughes High School at sixteen with special honor, and entering two years later upon her work as a teacher of little children.

Her marriage to Mr. Andrew J. Rickoff, then superintendent of instruction in Cincinnati, followed; and from this time her interest in educational work broadened and intensified, until she stood in the front rank among students of educational problems, and one of the most heroic in making possible their practical solution. She had a brilliant mind, rare conversational gifts, and was a felicitous writer. Her contributions to educational literature are a part of the treasured history of this association, and her readiness in address has often served to vitalize its discussions.

She was one of the first to recognize the value of the kindergarten and to take active measures for its introduction into the city of Cleveland; was quick to discern the need for a high-class literature for the schoolroom and to devise means for its attainment; was earnest in her belief in all wise educational forces; and thru the fifteen years of Dr. Rickoff's superintendency of the schools in Cleveland was the trusted helper in his professional work.

It was her custom to visit the schools for the younger children, to take for a day, often for a longer time, the teacher's place, sending the young "school mother" to see the work of associates or to her home for the needed rest; and, on occasion, carrying on this service of love for weeks, her sole compensation the joy of making others glad, thus saving choicest teachers to further work.

Few who are not responsible in supervision have given to its most delicate problems such wealth of study and of personal care; and much that is best in the schools over which her husband presided still bears witness to the permanent value of her work.

Mrs. Rickoff had a rare appreciation of childhood, and was a firm believer in very early entrance upon school life. Her plea for the child's freedom in the expression of its own understanding of the literature of the reading lessons, her suggestions on the transition from home to school, and her discussion of the needs of the young colored people of the South, the latter based on her observations while living for two years in the Carolinas, are among her most characteristic contributions to studies in education.

Mrs. Rickoff was much attached to this association, and was a strong factor in its social life. Endowed with personal beauty and with grace of manner, she easily attracted to herself those who, on close acquaintance, became her lifelong friends.

Anticipating the Congress of Education in Chicago, in 1892, the Elementary Department chose Mrs. Rickoff as its president, believing that she would represent effectively and graciously its membership and its ideals. But this meeting at Saratoga Springs proved her last in attendance with us, as, following the meeting at Saratoga, she joined her husband in a journey to the Pacific coast, to spend a few months with their only son, who had nearly two years before preceded them.

Letters from the northland were soon received, full of the enthusiasm and delight of the mother, happy in her loved ones, and of the poetic and imaginative traveler amid scenes of entrancing beauty.

A year of these happy associations was followed by an immeasurable sorrow in the sudden death by drowning of the manly son. The shock was severe, the prostration too great for full recovery; and, with broken health, she returned to the home in New York city, where, tenderly watched over by her husband thru the months of suffering, she passed beyond the shadow.

In a word of farewell, and with the possibilities in an untried journey vividly in mind, our friend repeated familiar lines, which come back to us today with tender interest:

"I know not where His islands lift
Their fronded palms in air;
I only know I cannot drift
Beyond His love and care."

Samuel M. Inglis

[PREPARED BY EDWIN C. HEWETT]

On June 1, 1898, his friends and the people of Illinois were startled at the telegraphic announcement that Samuel M. Inglis, the state superintendent of public instruction, had died suddenly at the Pennoyer Sanitarium in Kenosha, Wis. Superintendent Inglis' health had not been good for some months, and, by the advice of physicians, he had gone to the sanitarium, hoping to recruit for the active duties of the institute season. From time to time very favorable reports of his condition reached his friends, and he was confidently hoping soon to return to Springfield and resume the active duties of his office. But, on the evening of June 1, while chatting and laughing with friends on the veranda of the sanitarium, he was suddenly stricken and died in a few minutes.

His remains were brought to Springfield, where imposing funeral services were held in the state capitol. The flag over the building was placed at half-mast, elaborate and beautiful floral tributes decorated the walls and bier, the public offices were closed for the day, and a large concourse of state officers, leading educators, and friends from various parts of the state joined in the services. Attended by a large number of relatives, state officers, and other friends, the body was removed the same evening to Greenville, the home of Mrs. Inglis' father. On Saturday, after further elaborate funeral ceremonies, it was followed by almost the whole population of the city to the beautiful Montrose cemetery, and interred in the family lot.

Samuel Martin Inglis was born in Marietta, Pa., August 15, 1840. His father, Rev. George S. Inglis, was a Presbyterian clergyman, and Superintendent Inglis himself was an earnest and active member of that Christian communion during his life. While a boy he removed with his father, first to Ohio, then to Illinois, settling in Henry county. He graduated with the highest honors from the Mendota Collegiate Institute in 1861. The next year he enlisted in the One Hundred and Fourth regiment of Illinois volunteers, and was commissioned as second lieutenant by Governor Richard Gates; but, on account of his ill-health, he did not long continue in the service.

In the fall of 1894 he was elected state superintendent of Illinois, receiving a majority of 130,000 on a popular vote. His term of office would have closed in January, 1899. In 1897 he was an active member of the National Educational Association.

Superintendent Inglis was twice married. His first wife was Miss Anna L. Jackson, of Hillsboro, Ill., who died in 1892. Three years later he married Miss Louise Baumberger, of Greenville, Ill., who lives to mourn his great loss. He leaves no children.

His educational career was long, varied, and successful. It began in 1856 as a teacher in the district school of Hickory Grove, Henry county, at $28 a month. It included work in country schools, grammar schools, academy, as superintendent of city schools, professor in a normal school, and terminated in the highest educational position in the state. It was a continual movement upward, with growing advance in position, power, and compensation till the end. And it is said that he never applied for a position or for an increase of salary. In 1865 he was made principal of the Academy at Hillsboro, Ill., where he remained two years. He then became superintendent of schools in Greenville, Ill., where he remained fifteen years, accomplishing an excellent work in grading the schools and putting them on an efficient basis. During his stay in Hillsboro he read law in the office of Judge Rice; but he never entered the profession. All his subsequent life was given to educational work.

In 1881 the governor appointed Mr. Inglis as one of the trustees of the Southern Illinois Normal University at Carbondale. Two years later, at the request of his fellow-trustees and members of the faculty, he accepted the chair of mathematics in that institution. After three years of successful work he was transferred to the chair of English literature and rhetoric, which he continued to fill till he was chosen to the office in which he died. In the spring of the present year he was talked of as a candidate for renomination to the office of state superintendent; but on April 12 he was unanimously chosen by the board of trustees of the Eastern Illinois State Normal School, about to be opened in Charleston, to be the president of that new institution. He accepted the trust, expecting to enter upon the discharge of its duties next year. Some years since, Blackburn University conferred on him the honorary degree of A.M.; and, the day before his death, it followed this with the degree of LL.D. He never heard of the latter honor.

In person Superintendent Inglis was a man of good presence, possessing a physique that promised a life of more than fifty-eight years. In manner he was kindly, earnest, and sincere. He was a man of clean and honorable life, a genial and faithful friend, and true in all life's relations. That he was an earnest patriot was shown by his early enlistment in the military service of his country. His last word for the press, written May 15, was in commendation of the patriotism of the boys of a school who had just raised an American flag over their schoolhouse.

Since the death of Superintendent Inglis, the tributes paid to his manly character have been many and warm. At his funeral in Springfield, Rev. D. T. Logan said: "Public office of itself confers nothing upon a human character. It cannot make a bad man good, nor can it make a good man bad, a fact which needs to be emphasized in these days of wholesale and indiscriminate criticism of public men. But when the character is there, its influence is intensified by the prominence of the station. As a man is, so is his strength. What he is in his personal relations to his fellow-men he will be in his relations to his public duties. Samuel M. Inglis would not have been faithful in the performance of every duty, from the day he began to teach in the Old Hickory schoolhouse at Andover till the day he was called suddenly to lay down the office of state superintendent of public instruction, if he had not been a man of sterling integrity and consistent Christian character. The son of a Presbyterian minister, trained from infancy in the principles of righteousness, his name adds another to that already long list of sons of the manse who have attained an honorable prominence in business, professional, and political life."

On the same occasion, Hon. Richard Edwards, his predecessor in the office of state superintendent, said: "He has been an efficient officer. But we believe that a grander thing than this is true of him. In the grammar school he was a good teacher; in the Southern Normal, an efficient exponent of the laws of pedagogy; and in all these positions his clean, manly character, his pure motives, his high ideals of life, were an inspiration to all who came within reach of his personal influence. And here, we think, is the man's crowning glory."

The board of trustees of the Charleston State Normal School, at a regular meeting on June 8, 1898, passed memorial resolutions, in which they say: "In his relations, as teacher in the public schools, as superintendent of city schools, as professor in the normal school, as state superintendent of public instruction, and as a member of the various educational boards of the state, he was always industrious, honest, earnest, and faithful in the discharge of his duties. . . . . Thousands of men and women are better men and women because Professor Inglis lived. And a better monument than can be made from bronze or marble exists for him in the love and respect for his memory in the hearts of thousands of his surviving pupils."

President J. C. Gilchrist

[PREPARED BY HENRY SABIN]

Born in Allegheny City, Pa., May 20, 1831. Educated at Antioch under the care and guidance of Horace Mann, whose memory he held in great reverence. In 1860 he took charge of the seminary at California, Washington county, Pa., and was instrumental in converting it into a normal school. He was for a time president of the Fairmont Normal School, in West Virginia. In 1871 he came to Iowa to engage in institute work, and was chosen superintendent of the schools at Mason City in 1873. In 1876 he was elected president of the State Normal School, then just established at Cedar Falls. He continued in this position for ten years, and during that time laid broad and deep the foundations of solid learning and high scholarship upon which the school rests today. He was afterward president of the Northern Iowa Normal School, at Algona, and later dean of the normal department of the Northwestern University, at Sioux City. He filled all these positions creditably and with usefulness to the cause of education.

He died at Laurens, Ia., August 12, 1897.

One who knew him well writes of him: "President Gilchrist was an enthusiast — bold, defiant, impulsive, sometimes pleasantly obstinate. Talleyrand would have us 'beware of the enthusiast,' but I never thought there was a particle of the enthusiasm in the make-up of him whose memory we this night honor that an honest man need beware of. His enthusiasm never carried him off his feet, nor turned his head, nor detracted from his usefulness as a teacher or his manliness as an associate of men and women."

Another who was associated with him as a teacher for ten years pays this tribute to his memory: "As a teacher he magnified his office. Teaching was to him 'a high and holy calling, worthy of the ambition of the best minds.' He held before his pupil-teachers, as an ideal, the placing of their vocation among the learned professions. To him the teacher's mission was second to none; its aims were not temporal, but eternal; its rewards not human, but divine."

And yet another, who often counseled with him concerning the interests of education: "When I saw him for the last time, the same old spirit was within him. His body was failing him, he had lost something of his vigor of mind, but the great light of hope burned as bright as ever in his heart, and he was planning as broadly for the education of teachers and the improvement of the schools as tho he expected to work in the ranks for another fifty years. In the breast of a great man hope and courage go hand in hand, and when they die, his life work ends."

It is proper to add that, as a Christian believer, he was liberal in his convictions, but was ardently attached to the church of his choice, the Methodist Episcopal church, of which he was a consistent member, and in which he was an able minister. However arduous his duties in the schoolroom, he was never too busy to accept a call to preach the gospel of salvation in the pulpits of his own denomination, or of others, and so acceptable was his ministry that such calls were frequent and continuous.

Mrs. Susan G. Patterson

[PREPARED BY W. H. BOWERS]

Mrs. Susan Given Patterson died September 12, 1896, at St. Paul, Minn. She had gone to that city, during the vacation months, for the purpose of regaining her health. She was stopping at the home of her sister. She graduated at the University of Wooster, O., in 1876, with the highest honors of her class. She was a teacher of science in the Wooster High School for nine years, where her strong personality made a lasting impression. She was married in 1886 to George E. Patterson, a graduate of Wooster University. After eighteen months of married life, her husband died. With the energy of her character, she obtained a position as teacher in the Union City, Ind., public schools. Here her work was very successful, and for several years she ably filled the position of principal of the high school. She removed to St. Paul, and taught for one year in the schools of that city. She was recalled to Union City, Ind., to fill the position of superintendent of schools. This position she filled for two years with honor to herself, and much credit to the schools. The esteem in which she was held and her influence as an instructor are fully expressed in the following testament of appreciation which was adopted by the teachers of the city schools:

> We, the teachers and board of education of the public schools of Union City, Ind., desire to give expression to our sense of loss in the death of our beloved superintendent, Mrs. S. G. Patterson, and to testify as to her excellent life and character.
>
> In the death of Mrs. Patterson we have lost a leader, whose qualities of head and heart made her the successful teacher and ideal superintendent. Balanced, self-poised, able to command her resources, with a mind not only well stored, but systematically well trained, she was not only intelligent, but educated in the truest sense of the word.
>
> In discipline she was gentle yet firm; self-disciplined, she ruled without seeming to rule. Her methods developed the moral possibilities as well as the intellectual. Full of tact, she led many a one up to a larger faith in God and to nobler views of human living.
>
> She brought to her responsible position not only high intellectual and general culture, but those high moral and spiritual qualities by which she brought to us each day a fuller appreciation of the dignity, worth, and responsibility of our profession.
>
> We feel that the influence which she exerted in our midst will continue with increasing power, giving us better, nobler aspirations in the work which she so much loved and adorned.
>
> As a friend, Mrs. Patterson was kind, generous, self-sacrificing, and sympathetic; ready to assist not only by her wise counsel and encouraging word, but always ready with willing heart and skillful hands to assume the burden itself. We feel that our loss is not a professional one alone, but to each of us a personal loss.

Were a star quenched on high,
For ages would its light,
Still traveling downward from the sky,
Shine on our mortal sight.

So when our great one dies,
For years beyond our ken,
The light she leaves behind her lies
Upon the paths of men.

C. P. Rogers

[PREPARED BY HENRY SABIN]

C. P. Rogers was born in Kingston Center, O., June 22, 1844. He was a member of the One Hundred and Forty-fifth regiment Ohio volunteers during the war of the rebellion. His regiment was stationed on the plantation of General Lee, at Arlington Heights. He graduated from the State University of Iowa in 1869. He was superintendent of the Marengo schools 1869–74, and of the Marshalltown schools 1874–96.

Mr. Rogers was an earnest man, who gave himself without reserve to the work of teaching. He was prominent among the ranks of Iowa teachers, wise in his counsels, and strong in his leadership. They honored him with the highest professional office in their power to bestow, and his untimely death filled many hearts with sorrow. Under his fostering care the schools of Marshalltown rose to a position of prominence unexcelled by any in the state, if, indeed, by any in the Northwest.

One who had known him from his youth wrote this of him: "Iowa's educational history, if it commends the deeds and ability of any of this generation, can never be silent concerning the career and the professional accomplishments of the lamented Commodore Perry Rogers."

W. T. Poynter, D.D.

W. T. Poynter was born in Montgomery county, Ky., August 14, 1838, the son of Thomas and Angeline Poynter. While he was yet a child, his parents removed to Franklin county, near Frankfort, the capital of the state, where he grew up a strong, vigorous, and industrious boy. He was educated at Frankfort by Mr. B. B. Sayre, one of the most distinguished educators of the country, leaving school at the age of seventeen, and two years afterward marrying Miss Pattie Poston, of Winchester, Ky. At the time of his marriage he was principal of the Winchester Academy, one of the oldest institutions in the state, and by his thoroness in discipline and instruction made for himself, even at that early age, a reputation which most men acquire only after years of patient and laborious effort.

In 1867 he connected himself with the Kentucky conference.

Four years at Winchester, four years at Millersburg, four at Paris, and a single year at Carrollton completed that portion of his life which was devoted to the pastoral work. It was while at Carrollton that he made the purchase of the famous Science Hill Female College, which, under the fifty years of the presidency of Mrs. Julia A. Tevis, had become one of the most prominent educational institutions of the country.

His death occurred on Thursday, July 30. Funeral services were held Saturday morning in the chapel of the college, conducted by Revs. W. F. Taylor, John R. Deerings, Victor Savage, and T. J. Dodd, the latter of whom preached the funeral discourse. The chapel was crowded to its utmost capacity by friends from far and near, prominent among whom were not a few of those who had been Dr. Poynter's sturdiest opponents upon the field of controversy and debate—all now come together, equally testifying their sincere regard for the many distinguished virtues of the great man who had been taken from their midst, all equally sorrowing that their friend and brother was now no more.

Since 1879 Dr. Poynter had been the president of the female college known for nearly three-fourths of a century as Science Hill, at Shelbyville, Ky. As a teacher he was earnest and thoro, and in turn he required thoroness of every worker in his school, whether student or assistant. He was a cordial hater of pretense or show. His teachers were graduates of the best institutions in the country, and the work done by them in the education of young ladies was of the highest order. This is shown conclusively in the fact that students bearing his certificates were admitted into the places for which they were recommended, in the very best institutions of the North and East.

Says one who knew him as a personal friend:

> He was a man of honor in the largest, most exalted meaning of the word. From the earliest manhood we had known him, had been admitted to his intimate friendship, and had understood him as we have understood but few, and we can say deliberately that we can recall no instance in the long lapse of years of his having done a dishonorable deed or acted from a sinister motive; and we have no recollection of such deed or motive ever having been ascribed to him.

Joseph C. Jones

Joseph C. Jones, who died recently at his home in Chicago, was a man well known among educators in this country. He was born near Adrian, Mich., about fifty-seven years ago. His parents were New Englanders, who had but lately immigrated to what was at that time a comparatively wild and unsettled region. His early education was acquired partly at the district schools, but chiefly at the Friends' Seminary, in Raisin Valley, near his home. During the winter of 1864–65 he taught in the village school at Dundee. The next year he attended the high school in Detroit, and in September, 1866, he entered the University of Michigan, at Ann Arbor. Circumstances prevented his remaining long in college at that time, and so, at the beginning of the following year, he returned to Detroit to accept the principalship of the Houghton School in that city. After a successful experience of two or three years in the capacity of school principal, he resigned and again entered the university, from which he was graduated in 1872.

He had scarcely received his degree when he was elected to the superintendency of the Pontiac schools, a position which he retained with distinguished success until 1877, when he was called to a similar, but larger, field of labor in East Saginaw. He remained eight years in East Saginaw, bringing the schools of that city to a very high degree of efficiency, and placing them on a level with the best schools of the entire country. Thru his efforts the first high school in that city was established, and a training school for pupil-teachers was organized, which has since accomplished incalculable good. The free text-book system in Michigan owes its existence to Mr. Jones, his schools in East Saginaw having been the first to adopt and make trial of it. His influence during those eight years was felt not only as a school superintendent of rare abilities, but as a citizen and man of affairs having a high standing in the community of which he was a member.

In 1885 Mr. Jones resigned his position at East Saginaw in order to become manager of the educational department in the publishing house of Harper & Brothers, in New York city. In the performance of his new duties he proved to be as energetic, efficient, and successful as he had been in the superintendency of schools.

Apart from the professional or business side of his life, Mr. Jones was a man of varied attainments. His conversational powers were of the highest order. There were few subjects with which he was not in some degree familiar. " He was a manly man in the truest sense of the word," says his school board at Saginaw; and everyone who knew him will repeat the assertion. He was generous to a fault, and willing to sacrifice everything for the good of his friends. His heart was tender to every appeal for right and justice. He was always ready to shoulder more than his share of a load; to give the largest half of any good thing to his friend, reserving less the a moiety for himself; to suffer discomfort, if by so doing he could increase another's enjoyment. His life was a practical illustration of altruism in its best sense. "Be brave, be true, be unselfish"—this was the rule of conduct which he tried to impress upon the young people with whom he came in contact; and in his own character he presented the best exemplification of this teaching—for he was a living illustration of courage, truth, and devotion to others. Such men are few in this world, and they can ill be spared. In his death not only have his family and friends suffered irretrievable loss, but the cause of education, to which he gave his life, loses more than can ever be known or estimated.

John H. Tear

John H. Tear was born in McLean county, Illinois, in 1856. He grew up on the farm, attending the district school, and later attending the village high school. After attending the State Normal University, at Normal, Ill., for a term, he began teaching a district school in the fall of 1874. In 1877 he again took up work at the Normal University, graduating from there in 1881. After graduating he had charge of the schools at Astoria, Ill., for two years, going from there to Delavan, Ill., where he remained four years.

In September, 1887, he came to Chicago, taking the principalship of the Von Humboldt School; two years later he was transferred to the Washington School, where he remained till his death, which occurred February 15, 1897, after one week's illness of pneumonia.

Some years before his death he received the degree of Ph.B. from the Illinois Wesleyan University, taking the non-resident course. At the time of his death he was working at the University of Chicago for the degree of Ph.D., going there in the afternoons after school to recite. In his school work he made a specialty of philosophy and pedagogy.

He served as president of the Northern Illinois Teachers' Association, as president of the Chicago Institute of Education, and was at the time of his death vice-president of the Chicago Principals' Association, the superintendent of schools always serving as president.

Mr. Tear was a student of educational systems and principles. He was practical, and measured the value of all theories by what they would do for children. He was progressive, and tested methods before adopting them. He was honest, earnest, patient, modest, charitable, faithful. His teachers respected, trusted, honored him. His pupils loved him. His associates in the Principals' Association, in the Institute of Education, in the State Teachers' Association, and in every department of educational work, recognized his stability of character, his untiring energy in his profession, his clear perception of the true ends of education, and his hearty co-operation in all movements for great efficiency.

His life was an illustration of the motto which he often urged upon his pupils:

> "To be thoroughly in earnest is everything,
> To be anything short of it is nothing."

Solomon Palmer

Solomon Palmer was a native of Blount county, Alabama. His whole life was identified with the interests of that state. He was a gallant soldier in the war and was promoted to the rank of major.

In 1884 he became state superintendent of education, and in that position stamped his name and fame indelibly upon Alabama history. His superintendency was an era of progress and reform in Alabama education. During his administration state institutes were held all over the state, and wonderful advancement was made by the body of teachers.

He was a man of genial presence, and was usually present at meetings of the teachers wherever held in the state. For many years he was president of the Alabama Educational Association. He founded, in 1890, the East Lake Atheneum, in which he met with marked success.

He was a frequent attendant upon the meetings of the National Educational Association and represented his state upon many important committees. He was a pleasant, honorable gentleman, of thoughtful ways and quiet demeanor, yet full of earnest zeal in the cause of popular education.

Walter S. Perry

Walter S. Perry was graduated from the State Normal School at Ypsilanti in 1856, and from the University of Michigan in 1861; received the degree of Master of Arts from the university in 1871, and of Master of Pedagogy from the normal school in 1890. He was superintendent at Marshall from 1861 to 1864, and at Coldwater from 1864 to 1867. While at Coldwater he founded the *Weekly Republican*, in 1866, being its first editor. He was county superintendent of Branch county for 1867–68. In the spring of 1868 he became principal of the Toledo High School, completing the school year, when he was called to the presidency of the Prairie Du Chien College, Wisconsin, which position he held for two years, when, in 1870, he was appointed superintendent of the Ann Arbor city schools. This position he occupied with distinguished success until his death, December 15, 1897, a period of over twenty-seven years. He was president of the Michigan State Teachers' Association for 1876.

The following resolution, passed at the last meeting of the Michigan State Association, expresses the appreciation and love of his fellow-teachers:

> *Resolved*, That we hereby express our deep sense of loss in the removal from us by death of our friend and colaborer, Superintendent Walter S. Perry; that we feel his life has been a constant stimulus to that which was good and true in all who have been brought into contact with his pure, unselfish, and noble character; that in this association, of which he was a member almost from its organization, and in which his presence and his voice have been features most familiar and enjoyed, he has been an efficient officer and trusted counselor in all its affairs; that in the shaping of the elementary and secondary educational systems of Michigan we recognize him as one of the strongest forces working through the past thirty years.
>
> Filled with sorrow by his death, we yet rejoice in the life he has lived — simple, yet vigorous; scholarly, though unpretentious; gentle, yet manly and uncompromising when any question of integrity was at stake; a life which has been an incentive to the truest manhood in all who have personally known him.

Eugene D. Bagen

The death of Eugene D. Bagen came with a severe shock to his associates and friends. He was born in New York city, in 1851. He attended, as a boy, Grammar School No. 20, of which Mr. Alexander Morehouse is now principal, and from this school he went to the city college. He was a member of the same class of '81 in which were Commissioner Charles Strauss and ex-Commissioner Livingston, and Wallace F. Lyons, principal of Grammar No. 91. A few weeks ago a dinner was given to the class by Mr. Lyons, at the Hotel Endicott, at which Mr. Bagen and many of the members were present. Mr. Bagen did not graduate from the college, but he left after two years, taking a course of civil engineering in the University of the City of New York. He was interested in architecture and took up the study of that profession, but other circumstances led to his appointment as a teacher in Grammar No. 20; from which, after several years, he went to No. 7, of which Mr. Townley is principal. His knowledge of business details made him a valuable member of the Teachers' Mutual Benefit Association, and a few years ago, when the teachers' fair was held, Mr. Bagen was one of its most active workers and promoters, giving his services largely without remuneration for that work. He has since been interested in the many plans for increasing and adding to the efficiency of the work of this association. No one of its members has, probably, given more of his time in its behalf. He was also financial secretary of the Teachers' Building and Loan Association, where all the loans and investments of the association were made under his supervision.

His nature was gentle and unassuming, and his friendships were formed on all sides by those with whom he was known in the course of his official or social duties. He was one of the youngest of the staff of assistant superintendents, and none were more earnest and conscientious in their work.

Henry W. Blake

News of the death of Henry W. Blake came upon most of his friends as a surprise and shock. Few outside of his family and those closest to him knew that he had been dangerously ill with pneumonia since Friday. Never of robust health, he had been overworked, and it was feared from the first that his constitution might not withstand the attack. This is the end of a life upright, honorable, and useful in an exceptional degree. Henry Wolcott Blake was born in Coventry, Conn., July 20, 1848. He was the son of Rev. Henry B. Blake, now dead, who is well remembered in western Massachusetts. The father was a graduate of Williams College and received his theological training at East Windsor, Conn., and his first settlement was at South Coventry, where he remained from 1845 to 1855; then for ten years he was settled over the Congregational Church in Belchertown, where the son, Henry W., passed some of the pleasantest years of his life, and where he married his wife at a later period. Rev. Mr. Blake was, for some years after 1868, engaged in missionary and educational work in Wilmington, N. C.; and then came north and preached in West Springfield and other places. Henry W. Blake attended Monson Academy and entered Williams College, where he was graduated with the class of 1871. Among his classmates and friends were Judge Dunbar, of our superior court; Professor Terrett, of Hamilton College, and Frank Foxcroft, of Cambridge. Mr. Blake displayed a fondness for writing, and contributed to the *Williams Quarterly*. After leaving Williamstown he taught in North Carolina for a year or two, and was for a time with General Armstrong at the Hampton (Va.) Institute.

But his bent was toward newspaper and literary work, and about 1877 Mr. Blake became a member of *The Republican* staff. His earlier work with the paper was as a news-gatherer up and down the Connecticut valley in Hampshire and Franklin counties, and he made many friends in that region. There were some whom he especially esteemed, like the Champneys, of Deerfield, while the best people of two county seats came to know and value him. Later on he did more work in Springfield, and came to largely direct the work of the local department. His work was done with the utmost faithfulness and conscientionsness, and he was greatly respected by his employers and associates. After about ten years of this service, Mr. Blake withdrew, in 1888, to establish an advertising agency in company with William P. Derby. The business not meeting his expectations, Mr. Blake, within a year or two, made an engagement with Milton Bradley, and, for seven years until his death, was the head of the educational department of the Milton Bradley Co., and editor of the *Kindergarten News*. His training had especially fitted him for this work, and it was to his liking. He gained a broad knowledge of educational matters and a wide acquaintance with educators, while the kindergarten monthly publication gave him the field in which to indulge his fondness for writing. All who have read it will agree that the *Kindergarten News* was edited with exceptional taste and care, while his own contributions were always of value.

Mr. Blake was always regardful of his duties as a citizen. His was a religious nature, and during his life in Springfield he was identified with church work, first at the Memorial Church and of late with Park Church, where he was one of the deacons.

Walter M. Jay

On September 2, 1896, our beloved brother and fellow-worker, Walter M. Jay, was called to his reward. He was born April 25, 1857, at Elmwood, Peoria county, Ill. Graduating in the high school at that place, he entered Knox College at Galesburg, Ill., completing the full classical course four years later. He entered a law office and was admitted to the bar in 1878. After practicing law for about a year, he accepted the superintendency of the Avon city schools. In August, 1883, he married Miss Grace Townsend, immediately moving to Wellington, Kan., serving as superintendent of city schools there for four years. He again resumed the practice of law at Van Buren, Ark.; but later he accepted the superintendency of the Beloit, Kan., schools. In August, 1890, he was elected headmaster and bursar of St. John's Military School, at Salina. From the moment he assumed the duties of his new office his friends recognized his eminent fitness for the place. His education and experience enabled him to adapt himself at once to the great work of building up and enlarging the influence of the school. His fine social qualities and his readiness as a public speaker gave him recognition wherever he went, and at the time of his death the school had entered upon an era of great promise. The purity of his life and nobleness of his aim, and the devotion with which he consecrated himself to the discharge of every trust confided to him, awakened the profoundest respect and the hearty co-operation of young and old. One who knew him well says: "He was great in honest, earnest purpose. One of his cardinal virtues was his unselfish devotion to the good of others."

Edwin A. Charlton

Edwin Azro Charlton, eldest child of Walter and Mindwell Charlton, was born in Littleton, N. H., September 29, 1828. Died November 14, 1897.

He graduated from Dartmouth College in the class of 1854. Under the administration of President Lord, class honors were not in vogue, but Mr. Charlton's record placed him in the first third of the class, numbering fifty-seven, giving him election to the honorary Phi Beta Kappa Society. The next fall he became principal of the Haverhill Academy, then resuscitated after a long lapse, and remained there one year. In September, 1855, he went to Gilmanton, N. H., and was preceptor of the academy one year and a term, returning to Claremont in the beginning of 1857 to take up the study of his chosen profession, law, in the office of Freeman & McClure. Early in April, 1857, he was called to Lockport, N. Y., to take the principalship of the Union School. Here he remained for four years, teaching with such marked success, and so enjoying the work, that he abandoned all thought of the law. From this position he was called to the vice-principalship of the Union School in Schenectady, N. Y., where he remained until the summer of 1862. In March of that year he was married to Helen Elizabeth, daughter of Judge Alfred

Holmes, of Lockport, N. Y., and in the fall returned to Gilmanton to again assume the duties of preceptor of the academy. However, he remained only one year; the board of education of Schenectady offering him the place of city superintendent of schools, he returned to that city and resided there for five years. Receiving an urgent call to come to Auburn, N. Y., as city superintendent of schools and principal of the high school, he accepted it, but the climate did not agree with him, and after two years of successful and agreeable work he was peremptorily bidden by his physician to try another climate. Being invited to the presidency of the First State Normal School of Wisconsin, at Platteville, he resigned his position in Auburn and went west in the fall of 1870. He remained in this school eight years and a term, when he permanently retired from the teacher's profession. In the spring of 1879 he purchased the Brodhead *Independent*, a weekly paper published at Brodhead, Wis., and continued to edit the paper till the time of his death. Tho not engaged in the actual work of the schoolroom, Mr. Charlton did not lose his interest in education. How highly his work was esteemed is shown by the fact that, in 1884, his former pupils in the normal school made him a life member of the National Educational Association.

His evident literary taste was shown the first year after his graduation in the preparation of a book entitled *New Hampshire as It Is*, which met with reasonable success. Owing to the pressure of professional duties and a lack of physical strength, he performed but little literary work in the later years, except in occasional addresses, school reports, etc., but his writings are all marked by the use of "classic English," and he was highly esteemed as a critic for his candor and his scholarly ability.

DEPARTMENT OF SUPERINTENDENCE[1]

CHATTANOOGA MEETING

SECRETARY'S MINUTES

FIRST DAY

MORNING SESSION.—TUESDAY, FEBRUARY 22, 1898

The Department of Superintendence was called to order at 10:30 A. M., in the New Auditorium, by the president, N. C. Schaeffer, of Harrisburg, Pa.

Hon. E. Watkins, mayor of Chattanooga, delivered an address of welcome on behalf of the citizens of Chattanooga.

Hon. Price Thomas, state superintendent of public instruction, Nashville, Tenn., extended a welcome on behalf of the state.

Hon. Henry Houck, of Harrisburg, Pa., replied to the words of welcome in the name of the department.

C. J. Baxter, state superintendent, Trenton, N. J., read a paper on "The Township High School," which was discussed by J. Q. Emery, state superintendent, Madison, Wis.; W. W. Stetson, state superintendent, Augusta, Me.; A. K. Whitcomb, city superintendent, Lowell, Mass.; R. K. Buehrle, superintendent of schools, Lancaster, Pa.; W. W. Pendergast, state superintendent of public instruction, Hutchinson, Minn., and John MacDonald, editor *Western School Journal*, Topeka, Kan.

The department then adjourned.

AFTERNOON SESSION

The afternoon was devoted to a conference on the educational problems in the South, conducted by G. G. Bond, superintendent of city schools, Athens, Ga.

The first topic considered was: "What Kind of Normal Training Should the Common-School Teacher Receive?" It was discussed by E. C. Branson, professor of pedagogy, State Normal School, Athens, Ga.; W. N. Sheats, state superintendent, Tallahassee, Fla., and W. F. Slaton, superintendent of city schools, Atlanta, Ga. "A Plan for the Better Supervision of the Common Schools" was the second topic, and was presented by Charles D. McIver, president Normal and Industrial School, Greensboro, N. C., and discussed by Otis Ashmore, Savannah, Ga.; Superintendent Sheats, Tallahassee, Fla.; Captain George Le Roy Brown, University of Tennessee, Knoxville, Tenn.; J. S. Wilson, St. Elmo, Tenn.; Hon. R. J. Guinn, Atlanta, Ga.; Superintendent J. H. Phillips, Birmingham, Ala.; W. B. Thompson, Chattanooga; J. N. Rogers, Sandersville, Ga., and Superintendent Pendergast, of Minnesota. "What the Negro Gets from Common-School Education in the South and What He Gives to It" was the third topic, which was discussed by G. R. Glenn, state superintendent, Atlanta, Ga.

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[1] By resolution of the Department of Superintendence at its meeting in Indianapolis, Ind., February 17, 1897, the Secretary was directed to use the following amended spellings in all publications of the department, viz.: Program—(programme); tho—(though); altho—(although); thoro—(thorough); thorofare—(thoroughfare); thru—(through); thruout—(throughout); catalog—(catalogue); prolog—(prologue); decalog—(decalogue); demagog—(demagogue); pedagog—(pedagogue).

The conference of state superintendents on the "Minimum Preparation for Teaching," conducted by Grace Espy Patton, Denver, Colo., met in the Chamber of Commerce. Hon. Price Thomas, of Tennessee, presented a paper on the subject, which was discussed by Hon. O. T. Corson, of Ohio.

EVENING SESSION

President Schaeffer called the meeting to order and appointed the following committees:

COMMITTEE ON RESOLUTIONS

Charles R. Skinner, *Chairman*.
A. G. Lane.
E. W. Mackey.
L. B. Evans.
W. H. Anderson.
J. F. Millspaugh.

COMMITTEE ON NOMINATIONS

G. R. Glenn, *Chairman*.
O. T. Corson.
W. W. Stetson.
E. O. Lyte.
F. Louis Soldan.

The report of the Committee on Elementary Schools, prepared by Dr. John Dewey, Chicago, Ill., was, in his absence, read by Dr. W. N. Hailmann, Washington, D. C. A violin solo was rendered by Professor Joseph Cadek, of Chattanooga. Martin G. Brumbaugh, professor of pedagogy, University of Pennsylvania, Philadelphia, Pa., read a paper on "The Mission of the Elementary School," after which the department adjourned.

SECOND DAY

MORNING SESSION.—WEDNESDAY, FEBRUARY 23

The department was called to order at 9:30 by President Schaeffer.

Rev. Dr. J. W. Bachman, of Chattanooga, offered prayer.

The subject for this session was: "What Can Child-Study Contribute to the Science of Education?" Papers were read by Professor J. P. Gordy, Columbus, O., and Professor R. P. Halleck, Louisville, Ky. The subject was further discussed by Professor Charles O. Hoyt, Ypsilanti, Mich.

BUSINESS SESSION

Professor Ossian H. Lang, New York city, as chairman of the Committee on the, Minimum Standard of Professional Requirements of Teachers, asked that the committee be given at least one year more for the completion of its plans and recommendations. On motion, this request was granted by the department.

Dr. Hailmann called up the resolution offered by the Committee on Elementary Education and asked for its adoption by the department. On motion, it was laid on the table, to be considered at the business session of Thursday.

The selection of a place for holding the next meeting of the department was then taken up.

Invitations were received from the following cities: Columbus, O.; Albany, N. Y.; Asheville, N. C.; Detroit, Mich.; Austin, Tex. A vote of preference was then taken, with the following result: Columbus, 75; Detroit, 17; Austin, 12; Albany, 5; Asheville, 3.

The session then adjourned.

AFTERNOON SESSION

The afternoon session was devoted to a conference on "School Hygiene," conducted by Superintendent G. V. Buchanan, Sedalia, Mo. Superintendent Carroll G. Pearse, Omaha, Neb., read a paper prepared by Dr. W. A. Mowry, Hyde Park, Mass., on "Lighting and Seating of Schoolrooms," after which it was discussed by Superintendent F. Louis Soldan, St. Louis, Mo.; Superintendent J. R. Preston, Water Valley, Miss., and Mr. W. A. Bell, Indianapolis, Ind. On motion, Dr. Soldan's time was extended, and he closed the discussion.

A paper on "Ventilation of Schoolrooms," prepared by Superintendent A. P. Marble, New York city, was read by Hon. H. R. Pattengill, Lansing, Mich. The subject was further discussed by Superintendent S. M. Inglis, Springfield, Ill., and Superintendent J. L. Holloway, Fort Smith, Ark.

Superintendent T. A. Mott, Richmond, Ind., read a paper on "Contagious Diseases." Superintendent B. C. Gregory, Trenton, N. J., continued the discussion.

Superintendent J. H. Snyder, Tiffin, O., was absent, but he sent his paper, which, for want of time, was omitted, but was submitted as a part of the record.

In the conference of state superintendents, Z. X. Snyder, president of the State Normal School, Colorado, read a paper on "Reciprocal Recognition of State and Normal-School Diplomas by Other States." A paper was also read by Superintendent W. B. Powell, District of Columbia, on "Medical Examination of Children in the Public Schools."

EVENING SESSION

Professor A. J. Gantvoort, College of Music, Cincinnati, O., read a paper on "The Influence of Music and Music Study upon Character." President Schaeffer introduced Dr. S. F. Scovel, president of the University of Wooster, O., who discussed the subject briefly.

Mrs. Pratt, of Chattanooga, favored the department with a vocal solo.

Dr. W. T. Harris, Commissioner of Education, Washington, D. C., then read a paper on "The Value of the Tragic and the Comic in Education."

Superintendent Carroll G. Pearse was allowed to introduce the following motion, which was adopted by the department:

> That the president of this department, at this meeting, be authorized to appoint a committee of seven, which shall consider the matter of the classification of receipts and expenditures of state and city school systems, and recommend to the department forms of financial reports suitable for use by all state and city schools; and that the Board of Directors of the National Educational Association be requested to appropriate a sum of money sufficient to pay for the printing of the report of this committee, so that the report may be in the hands of the members of this department at the next meeting.

The department then adjourned.

THIRD DAY

MORNING SESSION.—THURSDAY, FEBRUARY 24

The department was called to order by President Schaeffer, and Rev. Thomas V. Tobin, rector of Sts. Peter and Paul Church, of Chattanooga, offered prayer.

Principal Richard Waterman, Jr., Chicago, Ill., read a paper on "Vacation Schools." Irwin Shepard, president State Normal School, Winona, Minn., read a paper on "Continuous Sessions of Normal Schools." These papers were discussed by Superintendent A. T. Barrett, of Chattanooga, Tenn.; Superintendent R. K. Buehrle, Lancaster, Pa., and Superintendent D. L. Ellis, Asheville, N. C.

Here Bishop Goodsell, of the Methodist Episcopal church, who was honoring the department with his presence, was introduced by President Schaeffer and briefly discussed the subject under consideration.

BUSINESS SESSION

Superintendent R. K. Buehrle introduced the following resolution, which was adopted:

> *Resolved*, That, in view of the great progress already made in the amendment and simplification of English orthography, as shown by the dropping of the final letter or letters in ax, program, etiquet; of one of the double letters in traveler, worshiping, and woolen; of the *a* in pedagogy and phenogamous; of the *o* in

economy, the *u* in honor and labor; and many similar changes and words; a committee be appointed to consider the advisability of certain additional changes to be advocated, looking toward the further and more rapid amendment and simplification of English orthography, said committee to report at the next regular meeting of this department.

A. C. McLaughlin, of the University of Michigan, chairman of the Committee of the American Historical Association and the Study of History in the Secondary Schools, spoke of the nature of the work of his committee and asked the co-operation of the members of the department.

The following resolution on elementary education, referred to in this section, was then called up by the president:

Resolved, That the present president of the Department of Superintendence appoint a committee of four, to be known as the Commiteee on Elementary Education, whose duty it shall be to collect and collate data in accordance with the proposition of Dr. Dewey's report;

That this committee be empowered to complete its organization by the appointment of nine additional members, in accordance with the recommendation of the same report;

And that the officers of the Department of Superintendence are hereby instructed to petition the Board of Directors of the National Educational Association, on behalf of the Department of Superintendence, to appropriate a sum not exceeding $1,000 for the year 1898-99, and a sum not exceeding $1,500 for the year 1899-1900, to be placed at the disposal of the Committee on Elementary Education for the purposes named in Dr. Dewey's report.

Upon motion, action was postponed for one year.

The following Committee on Uniform Reports was named by the president: C. G. Pearse, Omaha, Neb.; W. W. Stetson, Augusta, Me.; D. M. Geeting, Indianapolis, Ind.; John R. Kirk, Jefferson City, Mo.; C. A. Babcock, Oil City, Pa.; E. B. Prettyman, Baltimore, Md.

The Committee on Nominations reported the following names for officers of this department for the ensuing year:

For *President* — E. H. Mark, Louisville, Ky.
For *First Vice-President* — G. H. Conley, Boston, Mass.
For *Second Vice-President* — A. T. Barrett, Chattanooga, Tenn.
For *Secretary* — J. H. Van Sickle, Denver, Colo.

The report of the committee was accepted, and the persons named declared officers for the ensuing year.

AFTERNOON SESSION

The session was devoted to a conference on "Grading and Promoting with Reference to the Individual Needs of Pupils," conducted by Dr. Edward R. Shaw, School of Pedagogy, University of City of New York.

Dr. John T. Prince, agent of the Massachusetts board of education, read a paper on "Some New-England Plans and Conclusions Drawn from a Study of Grading and Promotion." This paper was discussed by Professor W. S. Sutton, School of Pedagogy, University of Texas. A general discussion followed, in which the following took part: Superintendent E. Coleman, Le Mars, Ia.; Dr. W. T. Harris, Washington, D.C.; Superintendent R. K. Buehrle, Lancaster Pa., and Dr. C. C. Rounds, New York city.

Superintendent James H. Van Sickle, Denver, Colo., read a paper on the "Plan of the North-Side Schools of Denver." Superintendent William J. Shearer, Elizabeth, N. J., read a paper on "The Elizabeth Plan." The discussion was opened by Superintendent R. H. Halsey, Binghamton, N. Y., who was followed by Superintendent George Griffith, Utica, N. Y.; Supervisor George Martin, Boston, Mass., and Superintendent J. M. Greenwood, Kansas City, Mo.

EVENING SESSION

The Committee on Resolutions made the following report, which was adopted by the department:

The members of the Department of Superintendence express their grateful appreciation of the efforts of the local committees of Chattanooga, municipal and educational, and of its citizens generally, to provide for our comfort and entertainment, and for their cordial and fraternal greetings.

The profit of this meeting has been enhanced by the privilege of viewing the scenes where conflicts were waged that are memorable in the history of the nation and of the world. Tho memorials of strife and of valor stand upon the fields of Chickamauga, Missionary Ridge, and Lookout Mountain, there has been no bitterness in our hearts as we have discussed measures designed to promote the permanent prosperity and to secure the peace of the republic. Let us hope that education everywhere may teach the sentiments of humanity, and that henceforth all differences between nations may be amicably settled thru the peaceful means of arbitration.

We heartily appreciate the courteous attention and the full reports which the press of Chattanooga has given the proceedings of the department, and accept its intelligent, comprehensive reports as an assurance of the efficacy of the press as an educational factor. May the example of the press of Chattanooga inspire journalism everywhere to give closer attention to educational problems, and to lead in the solutions of questions which concern the development of intelligence and character among the people.

The progress of educational affairs in the South during recent years is a cause for congratulation and encouragement. This progress is evidenced by the larger enrollment, the longer school terms, and the improved equipment of schoolhouses, but more particularly by the greater interest on the part of the people, and the increasing enthusiasm on the part of school officials. We learn with gratification of the improved condition of the negroes, the sympathy between the educators of both white and colored races, and express our confidence in the ultimate moral and intellectual elevation of the negro race by means of proper education.

This department approves of the plan of creating a committee whose duty it is to make or cause to be made a scientific determination of the factors involved in the subjects of seating, lighting, ventilating, and heating of school buildings; and to this end prepare and present to this body, at the meeting in 1899, a preliminary report setting forth the nature of the problems involved and its recommendations for the further prosecution of the inquiry—said committee to consist of nine members, as follows: the United States Commissioner of Education, two state superintendents of instruction, two presidents of normal schools, two city superintendents, and two other persons.

We commend intelligent child-study, but believe that great caution should be observed in using the child as a subject for psychological experiments, particularly by those not familiar with the essential principles which should be regarded in such investigations.

We recognize the force of utterances made in favor of closer and more intelligent supervision of the instruction given in our schools; the importance of selecting the best supervisors at adequate salaries; of professional training, and the determination to make our schools more useful by making them more attractive, by quickening in them an educational spirit, and by the adoption of proper courses of study and insisting upon the best methods of teaching.

We favor the further consideration and discussion of plans for continuous sessions of normal schools.

We indorse all suitable efforts that may be made to secure uniform qualifications for teachers' licenses for the different grades of school work, to be accepted in any state in the union; and we also favor a permanent tenure of service for worthy teachers who hold such licenses.

The department expresses its obligations to all railroads which have given unusual special rates for this meeting.

The thanks of this body are hereby tendered to the retiring president for his work in the preparation of the program which has been furnished; for the firm, courteous, and dignified manner in which he has presided over our deliberations, and in general for the successful conduct of the meeting now closed.

CHARLES R. SKINNER,
ALBERT G. LANE,
E. W. MACKAY,
L. B. EVANS,
W. H. ANDERSON,
J. F. MILLSPAUGH,
Committee.

Mrs. Watson, of Chattanooga, favored the department with a vocal solo.

The closing address was then delivered by Dr. S. F. Scovel, president of University of Wooster, Wooster, O., on "Realizing the Final Aim of Education."

The retiring president, having expressed his gratitude for the courtesies shown him during the meeting, introduced the president-elect, E. H. Mark, who thanked the members for the honor conferred upon him, and declared the department adjourned.

W. L. STEELE, *Secretary.*

ADDENDA

President Schaeffer reserved the right, before adjourning the department, to name the committees on school hygiene and spelling reform at a later date. The president has appointed these committees as follows:

SPELLING REFORM

Superintendent R. K. Buehrle, Lancaster, Pa.	Superintendent T. M. Balliet, Springfield, Mass.
Hon. W. T. Harris, Washington, D. C.	Mr. E. O. Vaile, Oak Park, Chicago, Ill.
Dr. C. C. Rounds, New York city.	

SCHOOL HYGIENE

Hon. W. T. Harris, Washington, D. C.	Superintendent A. P. Marble, New York city.
Hon. Frank A. Hill, Boston, Mass.	Dr. E. Oram Lyte, Millersville, Pa.
Hon. John R. Kirk, Jefferson City, Mo.	Professor W. E. Watson, Providence, R. I.
Superintendent F. L. Soldan, St. Louis, Mo.	Professor W. L. Bryan, Bloomington, Ind.
Professor W. A. Mowry, Hyde Park, Mass.	

W. L. STEELE,
Secretary.

PAPERS AND DISCUSSIONS

THE TOWNSHIP HIGH SCHOOL

BY STATE SUPERINTENDENT C. J. BAXTER, TRENTON, N. J.

Conspicuous and predominant among the educational needs of the United States today is the need for extending our high-school system. A plea for the township high school is, because of existing conditions, a plea for the rural high school. It should be established

I. AS A MEASURE OF JUSTICE TO OUR RURAL POPULATION

Many of our towns, nearly all of our cities, and some of our larger villages already enjoy a very liberal development of this system, and the youth in these centers of population are able to acquire an education that fits them for the ordinary duties of life. The fully equipped high school, in addition to some purely commercial lines of work, gives its students an intelligent appreciation of our literature, a good knowledge of American history; lays a good foundation for both a mathematical and a scientific education; teaches the art and establishes the habit of speaking and writing good English; is prepared to give such instruction in the languages as our colleges require for admission; and, last but not least, it should instill a love of knowledge for its own sake and a purpose to persist in its acquirement; also continue the social development, the character-building, and example in manners and morals that are begun in the true kindergarten and which are characteristic of it. If equal to these requirements, it furnishes the pupil with the master-keys of knowledge, and performs the important function of connecting the grammar school with both the world and our higher institutions of learning. Tho many of the so-called high schools fall below this standard, still our present high-school education is a fairly comprehensive system, whose provisions are liberal, whose results are good, and whose aims are distinctly high and important, because tending to elevate the standard of average intelligence, and to advance our people along the lines of enterprise, culture, and morality.

Up to the present time this valuable provision for larger development has been enjoyed only by those who reside in, or near, our centers of population. The many whose lines are cast outside these centers, on the farms, in the forests, in the mines, and who are connected with various other industrial interests located of necessity where towns and cities are impossible, are denied the privileges and benefits of the system. Our provisions for public education, primarily designed to be of equal benefit to all our youth, are today, because of the development of the high-school feature in the towns, tending to divide our citizens into two distinct classes: first, those for whose training and development a fairly suitable provision has been made; and, second, those whose advantages are confined to the rural school, with its limited curriculum and still more meager equipment. That these two classes will show marked and undesirable contrasts is as certain as that effect follows cause. The urban-bred citizen will be more alert, more progressive, more polished, more resourceful, more capable of discerning or creating opportunities within his environments, or of seeking them beyond, and thus far better fitted to fight the battle of life. The rural-bred citizen will be far less capable of handling new questions or treating complex subjects, less capable of adapting himself to new conditions when forced out of his accustomed sphere, or of making the most of any environment, because natural powers, fully the equal of those of his more favored urban contemporary, have not been so well developed.

Tho our past history affords us shining examples of those who have broken away from conditions most unfavorable, who have risen supreme above every difficulty, and made for themselves a name and fame that are world-wide, this does not disprove the fact that the contrast in culture, enterprise, thrift, and general intelligence between any two communities corresponds with the difference in their educational facilities. Inequality of opportunity does not become a nation which disavows all class distinctions, whose antecedents are democratic, and which professes to be such in principle and practice.

II. EDUCATIONAL EQUALITY IS ESSENTIAL TO PROGRESS AND DOMESTIC HARMONY

Differences such as I have endeavored to portray are too important to be overlooked. They mean the radical division of a free people along the lines of educational and intellectual inequality. This division is not fanciful. It exists today, to an unfortunate and ofttimes embarrassing extent, in every commonwealth of this republic. It shows itself in the adjustment of matters purely local, in the administration of the affairs of the county, the state, and the nation. We see progression on the one hand, and jealousy and obstruction on the other. Elements so diverse in thought, feeling, and motive refuse to harmonize and co-operate, and important public interests are thus sacrificed. Some of this diversity of opinion and purpose is frequently attributed to conflicting personal or sectional interests; but deeper rooted and more potent for right influence, because more closely allied to the higher and nobler self, are the character and the measure of development of the sovereign voter or legislator himself. If these shall come up to the full measure of his responsibilities, he simply seeks to learn wherein lies the greatest and most enduring good to the body politic, and, intent upon securing this, he reaches a right conclusion as to the measures he should support.

Not only in our own, but from all other civilized countries we hear murmurings of discontent, of the need of greater harmony and a closer identity of interest between capital and labor, of a widening breach between the rich and the poor. Educational inequality will tend to increase and intensify this unfortunate antagonism, and the most certain and effective means of counteracting it is to place all communities and classes, in the matter of public education, upon an even footing.

III. A MORE LIBERAL PUBLIC EDUCATION IS IN THE INTEREST OF ECONOMY

In the cities and towns where a more liberal educational policy has long prevailed it is found that the tax rate is lowest. The common council of the capital of my own state recently voted to erect a high-school building at a cost of $150,000. A committee was appointed to visit other cities and towns for the purpose of learning the most modern and desirable plans of construction, and among the things incidentally learned is the fact that an adequate provision for public education is not only in the interest of morality, enterprise, and social advancement, but is also a measure of economy. A higher standard of intelligence tends to a larger average of personal and family possession. This means a greater total aggregate of wealth; and the larger the assessable value of any district or municipality, the lower the tax rate required to secure a definite sum. Whatever promotes prosperity lessens the demands of charity and the cost of maintaining government. It is far wiser and more humane to give $5 to the cause of education than to pay twice this amount for the support of almshouses, penitentiaries, and courts of justice. The one city of my acquaintance most niggardly in the support of its schools is most heavily burdened with the care of its poor and the control of its criminal element. This is, however, not offered as the supreme motive for an adequate support of a civilizing and elevating force whose highest, most certain, and most enduring rewards are capacity for higher enjoyment, for larger service, for right living, and which are inherent, and neither incidental nor accidental.

We hear much of the claims of poverty upon wealth. Many believe that no one has a moral right to hoard millions within hearing of the cry of distress, of the pleadings of starving children. The broadest, truest, and most effective charity is the humane foresight which so trains the head, the hand, and the heart as to give the masses right views of life, makes them valued and valuable members of our social fabric; which causes them to be self-reliant and self-helpful, and makes them good citizens. This is the right conception of public education, is its high purpose, and is what it should aim to accomplish. This is the debt that wealth owes the commonwealth which gives it protection and which has made its accumulation possible. It is its first and highest obligation, which, if higher motives shall not prevail, it yet should cheerfully meet for its own sake.

IV. BETTER EDUCATIONAL ADVANTAGES ARE REQUIRED TO MAKE OUR RURAL POPULATION MORE CONTENTED AND ITS ENVIRONMENTS MORE ATTRACTIVE

The products of the soil not only furnish our entire support, but constitute the basis of our national prosperity. Their cultivation, manufacture, and distribution provide employment for more than three-fourths of our population. Foresight, judgment, and personal culture are quite as much in place on the farm as in other pursuits, and intelligent, well-directed labor will always be the most remunerative. Thru the schools and the influence of our teachers, both in and out of school, we should endeavor to correct the popular impression that only the most rudimentary education is required for agricultural pursuits, that learning unfits our youth to engage in them, and that it is quite unnecessary for them to spend much time in school, unless they purpose fitting themselves for one of the so-called learned professions or wish to engage in some employment which they regard as more congenial and genteel. Views thus erroneous are adverse to progress and culture in the rural community, cause its youth to appear at a humiliating disadvantage when brought into contact with those who are urban-bred, early engender a dislike for country life and a desire to get away from it. Because of this feeling the attendance of many rural schools is greatly diminished, others are attended only by the children of the farmer's tenants, and some are closed; while the school boards of our cities and towns are finding it more and more difficult to provide adequate accommodations.

Our rural interests are so vitally important that it behooves us to furnish educational advantages that will promote their highest development and materially add to the attractions and advantages of rural life. Instruction is needed that will instill a love of nature, introduce more intelligence and culture into the rural home; that will beautify it and its surroundings, and thus bring city and urban life into closer touch.

V. THEY ARE DEMANDED BY THE TIMES

From the close of the great Civil War to the present time our population has nearly doubled, and our great industrial interests have so multiplied and grown in magnitude, have become so diversified and complex, that there is today, not alone a demand for experience and skill, but for intelligent, self-directing labor. This is not peculiar to any single industry, but is a palpable want that is everywhere met, from the carpenter shop to the counting-house. A contractor recently said: "What a blessing it would be could I find workmen competent to execute the plans placed before them without constant oversight and direction. If supervision is withdrawn, even for a short time, then work wrongly done has to be torn down, and time, labor, and money are lost." A higher order of intelligence is needed on the farm. Farming along the old lines has in many localities ceased to be remunerative. A knowledge of plant life, of the soil and its elements, is essential to the adaptation of means to ends. Tho the school may fail to impart this special line of knowledge, it should at the least develop an intelligence that will make it easily acquired.

These higher demands are not peculiar to our industries, but include the so-called professions as well. Pupils who have acquired but the simplest rudiments of an education are no longer welcome to our leading divinity, medical, law, and dental schools. Many of our state boards of medical and dental examiners decline to examine applicants for license who cannot present a diploma from a college or an accredited high school as evidence of preparation to enter upon the professional course of study required. The same, or an equivalent, demand will ere long be made upon all who seek admission to our normal schools and teachers' training classes.

VI. ESSENTIAL TO A SAFE STANDARD OF CITIZENSHIP

Our so-called elementary or common schools do not prepare the great majority of our youth for the duties of citizenship. Any pupil of average ability can, under a good school system, easily complete the usual common-school studies by the time he reaches thirteen or fourteen years of age. He is then graduated, not educated, and sent adrift into the world unprepared for its experiences, unfitted for its duties, unfortified against its temptations, and this at the most receptive period of his life — just when best prepared to learn. There is not a teacher of extended experience who has not seen many pupils of this age, who have been given further school advantages, make more substantial progress in a single year than during any previous three years of their school life. Without the secondary or high school, the pupil is deprived of the instruction to which all his past life has led up and prepared him to receive; deprived of the instruction needed to enlarge his mental horizon, that is required to carry his thoughts beyond the environments of home and community to the interests of the state and nation ; denied the advantages that would introduce him to a higher manhood, and which would count for so much in his future career as a social and civic factor. Not until this stage of development is reached is the teacher, however skillful, able to lead the pupil to discern and acquire a taste for what is best in literature, permanently to interest him in the affairs of state, and successfully instruct him in the duties of citizenship which it is his birthright ere long to assume. We as educators *cannot*, and no fair-minded citizen *should*, close his eyes to the fact that the education which our elementary schools now provide is not broad enough and strong enough for a sovereign people.

VII. WILL PROMOTE ENTERPRISE AND PUBLIC SECURITY

Go where you will, you will find that the village, town, or city that stands pre-eminent in intelligence holds pre-eminence of rank and is regarded as an example for emulation. You will also find there the greatest business enterprise, the best churches, schools, libraries, and homes, and also the greatest security to person and property. It has been grandly said: "Intelligence is the life of liberty." It is its soul and safeguard. In the intelligence of its people lies the safety of the state. Enlightenment is far more efficacious in promoting the security of a people than military safeguards. Could the large amounts expended by the several states for such safeguards and the maintenance of their expensive accompaniments be diverted to the broadening, strengthening, and upbuilding of their public-school systems, this republic would be without a peer in educational facilities, and within its confines disorder and rumors of disorder would soon be gloomy specters of the past.

Many, with much regret, have noted that, according to our last census, there were in the United States in 1890 6,324,702 persons above ten years of age who could neither read nor write. It is a matter for still greater regret that we have far more than this number who, in point of intelligence, are hardly one whit the superior of these illiterates, and who have good reason to be far less innocent. Tho they can call words, they either read not at all or read that which is trifling or corrupting. Their thoughts revolve in the same narrow circle, and their feet tread in the same aimless, unaspiring, monotonous round of life. They took the initial steps to an education, but were not long allured in the way. Mainly in this class have the agitators, trouble-mongers, and demagogs found their following and the corrupt politician his purchasable votes. Not comprehending the high privileges conferred, and the great responsibilities entailed, by the elective franchise, it is only charitable to assume that many who thus sell their birthright do not fully realize the seriousness and the enormity of the offense. This is the class of citizens that would be indefinitely multiplied were the advocates of the "three-R" school curriculum able to dominate and direct our educational policy. In this age of enlightenment and progress, it seems almost incredible that any citizen of any state should insist that our public schools should be tied down to imparting the merest rudiments of an education. No state can expect a higher order of fealty and service than it qualifies its citizens to render. The dangers which threaten us originate among the ignorant. Their blind acceptance of the political and industrial heresies so constantly promulgated, and consequent tendency toward socialism and anarchy, can be counteracted and restrained only by the uplifting influence of education. As a nation we are vitally interested in the masses. The children of the plain people constitute the great majority. They will furnish our future voters, legislators, and rulers, and will, just as we shall elect, become either a scourge to threaten and plague us, or a power to dignify and bless.

VIII. ESPECIALLY NEEDED FOR THE IMPROVEMENT OF RURAL SCHOOLS

While it must be admitted that important concessions have been made in many states to the rural population, as regards the levying of school taxes and the apportionment of school funds, it is equally true that the conditions have been such that the rural schools have been operated at a great disadvantage. Tho no material with greater capabilities can be found, such schools have also in the matter of elementary education failed to keep in line with those of our cities and larger towns. The spirit of our institutions and the vital principle of our government demand equality under the law. The indispensable concomitant of equality under the law is equality of opportunity, and this is the central idea of popular education.

Every citizen whose intelligence and manhood serve to dignify the title, while acutely alive to local interests, is at the same time capable of regarding the matter of public education from a high and unselfish standpoint. Our several states support and control systems of public schools in which over 90 per cent. of our youth receive their only equipment for life. Therefore the state is the true educational unit, and to it must we look for a remedy for existing inequalities. Such remedy is the township high school. It will give the rural schools the supervision they have so long needed. It is their only hope of deliverance from the rut into which they have fallen. Much time and money, and a large measure of the golden opportunities of school days, have been lost to the youth of our rural communities because their schools have been without professional supervision. Such a high school would add to their character and efficiency, because they would be compelled to adapt themselves to its requirements. It would stimulate purpose in their pupils by holding up to them a measure of attainment, and induce them to remain in school that they might graduate at the end of the course. It would be a spur to their ambition by placing before them a goal to reach. With the child the standard of attainment is always the one in sight. Such high schools would relieve our ungraded and some of the so-called graded schools of pupils who have outgrown the opportunities they have to offer.

Every rural school with whose conditions I am familiar has several such pupils. They are so far in advance of the others that separate classification is necessary, and the attention they receive consumes an undue proportion of the teacher's time and energy. Tho the instruction given them is in some cases of doubtful benefit, there is no question as to its detriment to the lower grades. The law very graciously extends to these advanced pupils the privilege of attending school, but fails to provide educational advantages adapted to their needs. It would do better were it to close the doors of our elementary schools against them and welcome them to the township high school, which, together with the kindergarten, is required to round out and complete a public-school system.

IX. WOULD PROVIDE A LARGER RANGE OF SELECTION FOR SERVICE

If mental endowment were confined to fortune's favored few, to those who have at their command educational advantages and all other good things which wealth will procure, then the desirability of a higher standard of popular education would not be so apparent. But the sturdy children of the day-laborer sometimes furnish far better material for development than the offspring of his wealthy neighbor. Not all the children of the poor were ordained to be "hewers of wood and drawers of water." There is no broad-minded democratic teacher who fully realizes his equal measure of obligation to each pupil, and who sincerely desires for each all the good the world has to offer, but has many times earnestly wished that this or that bright child might have educational advantages beyond its parents' means, and be delivered from its hard and ofttimes debasing environments. How often has he regretted that so much of good seems placed beyond its reach, and thought how much more life could be made to mean to it than is ever likely to become a reality! And not alone, how much of light, and joy, and good, exists in vain so far as such child is concerned, but how much is lost to the community and the state!

The state has need of all the gifts that can be brought into its service, and, thru its failure to develop these gifts, to marshal all its available forces, falls far short of securing the high order and full measure of service that is its privilege.

X. AS A MATTER OF NATIONAL PRIDE

When history and all human experience prove to us that a state or a nation becomes strong, safe, and prosperous in the ratio that it advances in intelligence, it would seem that further reasons for promoting such intelligence need not be adduced. But there are some subjects of abiding interest not easily divorced from sentiment. In the world's onward march we as educators cannot endure to see our country fall behind. Her reputation is so dear to us, and so closely allied to our own, that we cannot avoid anxiety for that which makes or mars it; cannot avoid feeling deeply concerned for the interest with which we are connected, which we profess to serve, and which it is our high prerogative to advance. It would be a reproach to us should the United States fail to keep in line with the most progressive of the nations.

DISCUSSION

J. Q. **EMERY**, state superintendent of public instruction, Madison, Wis.—In what I have to say on the topic under discussion I keep in mind the intimation of the president of the department, when inviting me to take part, that the experience of Wisconsin would be the contribution expected from me.

In 1874 the then state superintendent of Wisconsin, in his annual report upon the conditions and needs of the schools in the state, strongly urged the adoption of a system of township high schools, and in his report clearly, forcibly, and eloquently outlined his ideas of what the character of these schools should be. He showed that his purpose in advocating this measure was not to provide a "*few long ladders* by which to climb to the solitary peak whence all the wisdom of the earth is under view, but rather many short and convenient and inexpensive ones by which to climb to the broad and fair and wholesome table-land of secondary culture." He did not urge the schools that he would have established as *preparatory schools*, in the sense primarily of fitting pupils for higher education, but rather as *supplementary schools*, which should afford facilities for instruction in the secondary branches better and more systematic than could be obtained in the district schools, which were then largely overcrowded. * * * * * * *

Following his recommendations, that were strong, urgent, and enthusiastic, the legislature enacted a law which authorized the formation of high schools by towns, cities, villages, or school districts. They were to be aided in their maintenance by a direct appropriation of $25,000 from the state, giving to each not to exceed one-half the amount paid for instruction, and not to exceed, in any case, $500 in any one year. To secure state aid, these schools were to be maintained at least thirteen weeks each year. * *

If any state has made a strong and persistent effort to promote a township system of high schools, that is true of Wisconsin. The leading teachers and educators everywhere were heartily in sympathy with the movement; a system of normal schools had been established, and they, too, were in sympathy with it; and it has received the cordial support of the state department all these years.

The clause in the original law which authorized villages, cities, and districts to organize these high schools was soon discovered to be a feature that could be used to their own great advantage. Very quickly free high schools began to be organized in cities and in village districts, in connection with the graded schools already existing. In many places where graded schools were not sufficiently organized, efforts were made to bring them into conformity with required conditions, that they might also have a high-school department under the state system. These schools continued to increase. Their value as a part of the school work of these places was recognized, and they became very popular.

After some years a state superintendent called the attention of the legislature to the fact that cities and villages had so largely utilized the proffer made by the state for aid in supporting high schools that they had absorbed all the appropriation without being able to receive one-half of the amount paid for instruction, as originally provided, even with the low minimum of $500. He recommended that the state appropriate an additional $25,000, to be used exclusively for the maintenance of high schools in towns where no graded schools existed, thus making a specific and direct appropriation for the encouragement of township high schools. This law was enacted by the legislature, and has ever since been on the statute book. Every state superintendent has urged towns to take advantage of the law. * * * * * * * * * * *

In the course of legislation several features have been added to the original law. Provision has been made that in the regulations for the organization of these schools not less than twenty-five pupils must be found resident of the high-school district organizing the school, who can pass a satisfactory examination in the common-school branches. When the high school is authorized and established, it must be taught by principals who are university, college, or normal-school graduates, or who hold state certificates. A course of study approved by the state superintendent must be administered. Another of these additions in recent years is that, when the second $25,000 appropriated for schools in towns where no graded schools exist is not called for by that class of schools, it is permitted to divide the fund among the high schools of the other class.

These schools have also been placed under the direct supervision of the state superintendent, and, as assistant to the state superintendent, a state inspector of high schools has been provided, who is paid a generous salary, and who spends his time in inspecting the schools, advising the teachers, inspiring the communities with a good sentiment toward high schools, and in enforcing the laws and regulations relative to the qualifications of assistants and principals. The qualifications of each principal and of each assistant must be approved by the state superintendent. * * * * * *

Notwithstanding the purpose of the original law, all the efforts of the leading educators and teachers' associations of the state, of the state department of education, and the direct aid proffered by the state, the people of Wisconsin have not made the township the unit for organizing *high schools*. They have readily seen the value and acknowledged the worth of high schools, and have established and maintained them liberally; but they have been organized in connection with the district unit rather than the township unit. So they have been organized very largely, almost universally, in connection with our graded-school system. We have three schools in the state that are maintained by towns in which no graded schools exist. No more than four such schools have ever existed at any one time. Different schools of this class have, from time to time, changed their basis of organization from the township to the district unit.

While we must admit that the original and continued effort to establish and maintain township high schools has not resulted as anticipated, and that their advantages, in the indirect way, which were hoped to be produced upon the rural schools, have not been secured, still Wisconsin has developed a free high-school system of which she is proud. * * * * * * * * * * * * * * * *

The Wisconsin free high schools, as now organized and administered, are a great power in the state educational system. They furnish the requisite academic preparation for the admission of their graduates to the state university, the state normal schools, and the college. They are the chief reliance for preparing the great body of teachers required in the district schools. Their influence is very great on the work of the lower related grades and on the work in surrounding rural district schools. The high schools receive a very great stimulus from the university, the normal schools, and the college, and in turn furnish incentives that give a great uplift to schools of lower grades. And they are the local secondary schools in which many young people find their only opportunity for supplementing their common-school education.

STATE SUPERINTENDENT W. W. STETSON, Augusta, Me.— Illiteracy is increasing in the older states. One of them has dropped to the fourteenth place, another to the twenty-fourth, and still another to the twenty-sixth. These changes are due to three principal causes: children have not the sterling qualities which make it possible for them to provide means for their own higher education; the expense of a secondary education has largely increased within the last twenty-five years; the local interest in academic education is not as influential as in former days. It is a noticeable fact that primitive and coarse surroundings, which were means of grace to a pioneer people, are sources of poison to poor people in old communities.

These conditions indicate the need of high schools in rural towns. Where maintained, it is noticed they are helpful in producing the following results: They exert a wholesome influence over pupils in the lower grades by stimulating the boys and girls to continue their education in higher institutions of learning. They elevate the standard of the local teaching force, and thus furnish a higher grade of instruction. They breed an intelligent interest in education in the community. They save parents large sums of money by permitting them to educate their children without sending them abroad to attend fitting schools. They bring college boys with their stimulating influence into the homes of the country people. In many instances they become the literary center of the town, and have connected with them libraries and other helpful agencies. The high school should be located in the common-school building which will best serve the largest number of pupils in any town. Funds for its support should be furnished, one-half by the state and one-half by the town. The course of study should include instruction in three sciences, three departments of mathematics, and four years of work in English. In special cases Latin may be substituted for a part of the English and one or more of the divisions in science. The strongest personality and the best teaching force of the school should have charge of the instruction in English.

A. K. WHITCOMB, superintendent of schools, Lowell, Mass.— I am glad to be able to report that what Horace Mann called "the inalienable right" of every child in the commonwealth to all the education for which God and nature fitted him is secured, so far as a free public high school can do it, for every boy and girl in Massachusetts. By state law, every town, or township as our towns would be called in most states, must maintain a high school or pay the tuition of its children in the school of some other town or city. If the town is so small that compliance with this law would be an unreasonable burden, that is, if its total valuation is less than one half million dollars, the state pays the tuition. Free transportation is also provided in some cases, and the road is thus opened for every child in the state to go straight from his mother's knee to the university, by the way of the free public school. More we could not well do; less we would not.

R. K. BUEHRLE, superintendent of schools, Lancaster, Pa.— I wish to ask whether the conditions described as existing in Massachusetts are not those of urban schools rather than schools in sparsely settled rural districts. We are told that Massachusetts has the longest school term, pays the highest wages to teachers, and offers high-school facilities to all her pupils. Is this not due to the fact that the population of Massachusetts is centered in large cities and thickly settled communities? This is a point to be taken into consideration whenever we make comparison of educational advantages in different states in the union.

W. W. PENDERGAST, superintendent of public instruction, Minnesota.— The rural

population of Minnesota is very large and the urban comparatively small, yet all that the gentleman from Massachusetts said about the high-school privileges enjoyed by the pupils of that progressive commonwealth is equally true of the North Star State, where *no* tuition is paid *by* or *for* non-residents.

Every high school, in consideration of the special aid received from the state, holds its doors invitingly open to all scholars under twenty-one who are fitted to enter, no matter in what part of the state they may live.

WHAT KIND OF NORMAL TRAINING DOES THE COMMON-SCHOOL TEACHER OF THE SOUTH NEED?

BY E. C. BRANSON, PROFESSOR OF PEDAGOGY, STATE NORMAL SCHOOL,
ATHENS, GA.

1. The common-school teacher of the South does not seem to me to be uniquely conditioned either in his resources or his needs. If his scholarship or pay be poor, this has not been without parallel elsewhere. If he is an apathetic drudge in need of spiritual awakening, this again is a state of things common enough among underschooled and overschooled teachers alike.

To be sure, the common-school teacher has only recently come into existence in the South, but he has been embarrassed by untoward surroundings, yet no more than elsewhere at the start. Whenever he has had ability and character, he has come into public place and power as often and as easily in the South as in the North or West. He wears the badge of inferiority no more in my state than in yours. His measure of contumely in the South is no more than his Peck in the North. There be Pecks south and Pecks north. Perhaps they might be called Pecksniffs all.

And so it may be that a discussion of the professional needs of the common-school teachers of the South will be of general application. Wherever this is not the case, you will not hesitate to set me right, for I have no wish to be impertinent.

2. In a prefatory way I desire to urge certain conditions precedent to the largest usefulness of our normal schools.

(1) Our normal schools need to be open to students thruout the entire year. Otherwise they do not reach the teachers who are already teaching and who in the South are coming widely to feel a need for help. Organization of the work would require something like progressive twelve-week courses, and four stated registration periods between these during the year. The leisure of the faculties for professional search and research would be infringed upon, but doubtless each of us would discover compensating satisfactions in the new adjustments necessary. I believe the

boards of control would split differences with us, in salaries and in courtesies, wisely and generously; but, in any event, I am in favor of a continuous session in our normal schools in order to reach especially the teachers who are already teaching, and who want to spend their vacations doing college work with us. As a rule, these students are the most valuable material we have in our normal schools. We had more than five hundred such students in the Georgia State Normal School last year, where our session runs thruout the summer.

(2) The common-school teacher needs to find the gross total of expenses reduced to a minimum in our normal schools; otherwise they are beyond his reach, for his salary in the South is a bare pin's fee. The cost need not be beyond $8 per month for fees, fare, room, room attendance, light, fuel, and laundering; so the problem has been solved practically in the State Normal School of Georgia.

(3) The faculties of our normal schools need to be out in the open field, working in the institutes and addressing popular audiences whenever occasions arise and chances permit. That is, there is need of missionary work, normal-school extension work, correspondence courses—anything, everything, that will widen and strengthen the influence of our normal schools. Normal-school faculties, like all other college faculties, stand in danger of insularity. It may mean a ripening of scholarship, but it also means a weakening of social and professional power. Besides, there is urgent need in the South of David Page's spirit of propagandism. We have our Horace Mann in Georgia, but we stand in need of David Pages.

(4) I enter upon the next item with pain and hesitancy, but I am bound to say that I believe the officers and instructors in a normal school ought to be completely committed in conviction and in conscience to the normal-school idea. It is not always the case. Indeed, it is frequently not the case, and I have observed that it vitally affects the usefulness of the school. The most spirited contentions I have ever had in favor of the utilities of professional teacher training have been with teachers and presidents in normal-school faculties. Just as Luther found skepticism rife in the Holy City, so I have found professional unbelief in the high courts of normal-schooldom, prudently silent or cautiously avowed, as the temper of the individual varies. I have sometimes felt that a thoroly honest man, skeptical of the utilities of professional teacher training, would not undertake to direct the policies of a normal school or draw upon its revenues; but I may be wrong, of course.

3. And now I come to consider the concerns of efficient normal training, having in mind, of necessity, the needs of the common-school teachers of the South, with whom I have been, in some way, in contact all my life.

(1) In the first place, there is general need of open announcement that the normal school exists to prepare the fit, and, as far as may be

possible or proper for it, to eliminate the unfit applicant for the teacher's place. As a rule, the men who have most influenced the development of normal schools were not bred in such schools.

That the teacher can be made out of any kind of material is a clear fallacy to which normal schools stand committed apparently, and, for the most part, really. Much of the opposition to normal schools in the South, in intelligent quarters, is provoked by this attitude on our part. Would it not be better to say frankly that the teacher can be made out of only fit material; that native fitness for teaching is indicated by such qualities as insight, sympathy, sense, conscience, and courage; that without these no amount of culture will avail; and that the function of the normal school is merely to reinforce native teaching endowment with the accumulated wisdom of the race, and so to add to the gifts of each the gains of all in the world of education?

(2) Briefly and roundly, then, a proper teacher-culture endeavors to enrich and develop native teaching aptitudes with academic scholarship, with a knowledge of pedagogy, psychology, and methods, to the end that the teacher may be stimulated to go on to outfit himself still further in virile and thoughtful ways of his own in his own schoolrooms. These six essentials of teacher-culture—native aptitudes, academic scholarship, pedagogy, psychology, methods, and thoughtful experience—are all to be duly valued and set in harmonious adjustment.

No one of these can safely be ignored. No one of them can safely be exaggerated or discredited unduly in our schemes of normal training. Fundamental divergences begin when we overvalue any one or any combination of them, short of them all. Thus, the Philistine insists that endowments of birth are all-sufficient. The man of university breeding commonly contends that scholarship and common sense are all that is necessary. One eminent normal-school authority discredits methods and practice teaching, and relies upon culture, philosophy, and individuality. The commonest and most lamentable thing is the normal school in which scholarship is at a minimum and the tricks and quirks of mere method are at a premium.

(3) The student that enters a normal school needs at once to have a bird's-eye view of the essentials of teacher-culture, to be set safely upon their mastery and brought to realize that it means a lifetime of tuition, and of self-tuition mainly. There is immediate and immense uplift and enlargement for a teacher in getting a schematic view of his life work. If he be set going properly, in a normal school or out of it, and can keep himself under way vigorously, then his own room and schoolroom may become the best normal school for him. Unfortunately it is common for the drudgery of a teacher's daily work to arrest rather than promote his development in most of these fundamental particulars. This is nearly always the case, unless he have what Wordsworth called the vital soul.

And so we find men and women in our normal-school faculties who have ceased to have, or never had, an inspiring largeness of view and a sturdy quick-step upward. Whatever else the common-school teacher of the South needs, he needs first and most of all a broader horizon and a certain precious hunger of soul to know something more than he knows, to do something better than he does, and to become something better than he is. He needs uplift and uplook, and up-reach. If he gets these in our normal schools, he must come into the presence of instructors who in possessions and powers, personality and presence, are tonic and quickening influences; who are centers of light and leading— men and women like the teacher George William Curtis celebrates in *Prue and I*, "who was like a well of deep, pure water, into which we looked one day and saw the stars."

(4) The normal student has a right to expect tuition under instructors of large and liberal preparation, who have run the gamut of school experiences, his own among them, and who are on a footing with him, but are a head taller. Still we find in our normal-school faculties raw, young graduates, capital scholars sometimes, and sometimes capital pedagogs — in the continental sense of the term — but teachers without practical experience in teaching. Sometimes they are very strong and useful teachers; but I dare say they would have been much more useful and strong if they had served a reasonable apprenticeship in the ranks beforehand. Still oftener, and still more sadly, we find other instructors there who are unaware of the significance of a vast professional literature, or are skeptical of its value.

(5) Again, the common-school teacher down South needs to know more. He needs lamentably a larger scholarship. Our normal-school curricula need extension and enrichment, and need these sadly. Normal schools have upheld low ideals of scholarship, somehow and strangely. The scholarship of normal graduates rarely ever challenges the respect of the universities. The scholarship of normal-school faculties similarly falls under suspicion.

The graduate of the normal school needs to know, not less, but more than the college graduate; to know it more thoroly, and certainly to know it very differently. Our standards of entrance scholarship are low, and of necessity, as it has seemed. We shall probably have to do a great deal of elementary academic work for many years yet. The standards of admission can be raised, slowly it may be. What we can do more easily and more promptly is to enrich and extend our courses. The full honors of the school can be deferred in time and exalted in value. I believe I have been in contact recently with at least two hundred teachers who would return to us during their vacations year after year for ten years in order to win the full diploma of the school. The lesser awards of the school could remain in force and their value be gradually increased.

These lesser rewards referred to are licenses to teach, of various grades, good anywhere in the state.

This extension and enrichment of our normal-school courses would immensely magnify and dignify the ideals of teacher-culture along with the whole idea of education, both in the minds of our teachers and of the general public. It would be daring to deny that there is need of both these results.

(6) I stand on ground much less certain when I contend that our common-school teachers need to study methods liberally in our normal-school courses. There is an aspect of this subject that doubtless raises goose-flesh along the spines of us all. But the worth of a teacher is ultimately determined by what he is, what he does, and how he does it. He is immediately and constantly teased by the puzzles of what to do and how to do it. I have been laid under compulsion in this matter by the anxiety of my students, and so have many sins to confess and to regret. Our normal-school courses need to satisfy, as wisely as may be, what the students feel to be an immediate and urgent necessity. There are certainly very grave dangers to be avoided. The student must not be strait-jacketed. He must not be allowed to drop into the imbecility of mere imitation. Individuality must have the full limits of rational freedom. Thoughtfulness must be challenged at every step of the way. He must be compelled to hunt down the explanations of successful teaching and the causes of failure. His mind must be kept busy noting the purposes in the teaching, the principles of teaching at play in it or the lack of them; the orderliness of the details or the lack of it, and the subjective results of it all upon the pupils taught. If the student's work in methods can be safely based upon observation, reflection, and expression, then, perchance, we may avoid turning out "the trained teacher, who is no more a normal teacher than a trained dog is a normal dog," as has been said. I agree that satisfactory work in methods in our normal schools is a very, very difficult problem. I have been brought to realize this keenly, and have asked: Who is sufficient for these things?

The student needs a chance to observe model teaching in the model school. The head of the model school needs to have a rational and liberal educational creed, needs to be broadly and acutely a woman of philosophic sight and insight, needs to have swept the field of educational ideals and endeavors, needs to know what the great world is doing in its schoolrooms today, needs to be a woman of unconscious skill, and to have the ineffable graces of the real teacher. What she needs to know and to be takes one's breath away; but every other instructor in the school needs to be all this no less than the model school-teacher. I have not observed that it is deemed necessary for the ordinary college professor to be a master of class methods; but it is overweeningly necessary that the normal-school instructor be a real teacher, whose recitations constantly exhibit sound principles of teaching, and are objective studies for the student in safe methods.

Formal pronouncements upon methods need to be made up by a man who has restepped the march of developing educational ideals and methods; who knows what is ideally desirable, and what is actually possible for his students in their schoolroom experiences; who is a sound pedagog and a teacher of practical skill; who knows what has been done in the schoolrooms of the past, and what is going on in the best schools of today; who lays stress upon the purposes and principles of method, and arouses intense activity of thought in his treatment of this subject. These sound like extravagant conditions, it may be, yet they must be approximately satisfied, or every once in a while we shall have our students pitching their tents in the graveyard of dead methods.

Observation and reflection in the methods course need to be followed by expression of professional gains in practice teaching, wisely planned and conditioned. Here again is a problem of great perplexity. So difficult is it that it is easily a failure or worse. I may say frankly that it satisfies me as little in our own school as it does in most of the normal schools in which it has been my fortune to study it. But the possible values of it seem to me to be beyond all question. It forces students into pedagogic attitudes. It arouses intense activity of mind. It brings a student into practical consideration of the purposes, principles, and details of good teaching. It evidences to him the necessity of carefully planning his lessons. It discloses to him his weaknesses, his poverty of resources, and his need of knowledge, much beyond what is ordinarily thought to be necessary for the teacher in elementary work. But the surroundings easily induce paralyzing self-consciousness, exaggerate the mechanics of mere method, and depreciate the transcendent values of personality in teaching. The fact that real teaching at the last defies analysis and communication is apt to be overlooked. Real teaching, like good manners, is a thing that can be learned, but cannot be taught in its very finest sense.

(7) And, finally, our teachers need to be started in our normal schools into a sound educational philosophy, and to come to love this side of their work with steady cumulative fervor, as their hands are more and more dyed in the details of practical teaching, and their hearts are more and more mellowed by the companionships of youth and the widening relationships of life. We have come much nearer relating the philosophy of thought to the problems of instruction than we have come to relating the philosophy of ethics to the problems of discipline and control. What we have done with ethics in our normal schools is either nothing at all, or is a thing altogether in the air that touches the earth at no point whatsoever. Our schemes of discipline are yet to be brought to the bar of

philosophy. This subject seems to me to be overwhelmingly important, and yet we have done relatively little toward its solution.

What kind of normal training, then, do the common-school teachers of the South need? In a word, they need a kind of training that can be had only in the presence of men and women whose lives are both concentrated and consecrated, as Froebel's was—

> "Who grew not alone in knowledge and in power,
> But day by day and hour by hour
> In reverence and in charity."

BETTER SUPERVISION OF THE PUBLIC SCHOOLS IN THE SOUTH

BY CHARLES D. McIVER, PRESIDENT OF THE STATE NORMAL AND INDUSTRIAL COLLEGE, GREENSBORO, N. C.

The census of 1890 showed the following percentages of urban population as compared with the total population:

For the United States,	29.20
North Atlantic states,	51.81
North central states,	25.91
Western states,	29.99
South Atlantic states,	16.03
South central states,	10.45

The urban population in the entire South is less than 13 per cent.; the urban population in Mississippi is less than 3 per cent.; in North Carolina less than 4 per cent.; in Arkansas less than 5 per cent. In other words, two-thirds of the people in the United States live in the country, or in villages and towns too small to be considered as cities. Less than half the people in the northern section of the country is found in cities, while in the South the rural is more than six-sevenths of the entire population, counting, as the census report does, no community a city whose population does not number 8,000.

Even including all towns of 1,000 inhabitants in the urban population, it is estimated that in such states as North Carolina, Mississippi, and Arkansas about nine-tenths of the entire population live in the country.

Considering these conditions, the supervision and improvement of the country public schools is a question of supreme importance.

Practically all public schools in our large towns and cities are under some kind of intelligent supervision. It is equally true that intelligent, effective supervision of the public schools in the country is very rare.

That this is true is not chiefly the fault of the supervisor. In the discussion of this problem he should be protected from assault by some such sign as the one used in the "big meeting," which read: "Don't shoot the organist. He is playing the best he can."

Let us look for a moment at the conditions by which the average supervisor of public schools in the country is handicapped.

To begin with, the average county supervisor in the South receives only about $500 or $600 a year, and in many cases, if not all, he must pay his traveling expenses out of that salary.

The difference in density of population between the northern and southern sections would render a system of supervision which is fairly satisfactory in the former totally inadequate for the latter. The number of inhabitants to the square mile in the South Atlantic states in 1890 was 32.98; in the South central states, 18.94; while in the North Atlantic states the number was 107.37. In Massachusetts the number was 278.48, while in North Carolina, Georgia, and Tennessee the number was, respectively, 33.30, 31.15, 42.34.

Even in 1840, when the general public-school movement began to take shape, the South Atlantic states had for each square mile only 14.60 inhabitants; the North Atlantic states, 41.72. At that time Massachusetts had 91.75 and North Carolina 15.51 inhabitants. Even if there had been no Civil War, and even if the wealth of the two sections had been approximately the same, the work of every part of the public-school system in the South would have been more difficult than the corresponding work in the North, on account of the great difference in density of population. Add to this the difficulty of eradicating a large percentage of illiteracy among its white population, supplemented by the burden of a whole race of illiterates. The difficulties arising from poverty and sparseness of population are intensified by the necessity for maintaining two systems of schools, one for each race.

There is another difficulty in the way of developing a public-school system among us, which in some degree has been, at one time or another, a hindrance to public education everywhere. I refer to the idea that public education is a charity, and that a public schoolhouse is nothing more nor less than a literary poorhouse. Up to thirty years ago the best educated men in many of the best sections of the South regarded, and sometimes called, the public-school fund the "poor fund," and the free schools were regarded as places where benevolent-minded people saw fit to care for the indigent. This idea remained longer with the South than it did with the North, or with those sections settled by emigrants from the North and South. However, the idea of charity in connection with public education has not entirely disappeared in any part of the country. In many sections outside of the South there is a system of free text-books to the children of the "indigent poor." So long, of course, as the idea of charity is connected with public education, two baneful results are inevitable: first, a failure to realize that the public schools ought to be as good for the supposed beneficiaries as the supposed benefactors would want them to be for their own children; second, the pride of many self-respecting parents would prevent them from sending their children to pauper schools.

If it has been a difficult matter to secure effective supervision in the rural districts north, how much more difficult has been the struggle of the state superintendents and the county superintendents and the other educational leaders in the South, where most of the difficulties encountered in the North are supplemented by poverty, sparse population, the double school system, race prejudice, and kindred hindrances!

I have not drawn this rather dark and somewhat desperate picture of our peculiar difficulties to make a complaining comparison, nor is there intentionally in anything I have said either envy, jealousy, censure, or apology. I have simply stated the hard conditions under which we labor, and I desire to go on record as having faith in our ability to meet the obligations resting upon us, provided we will act sensibly and honestly, with determination and patience.

I have no elaborate plan of supervision to propose. What we need is something to supervise, as well as a supervisor. The average length of the school term in the South is only about one hundred days, and any proposed plan of supervision for a southern state which does not include the idea of educational leadership among the citizens in his community on the part of the supervisor must eventually prove a failure. Certainly, if the teachers in the city schools, where comparatively good salaries are paid, need to have their work constantly inspected and criticised by a superintendent, and need his stimulating example and direction in regard to right principles of education and better methods of teaching, no sane person would claim that there is not tenfold more need for this constant supervision in the rural districts; but it is impossible, as I see the conditions, for us to have that kind of supervision in the present generation. What we need most in every country community of the South is at least occasional contact with a teacher who, in addition to his professional skill, enabling him to rank easily among the first men of his profession in the public or private schools of his community, is an educational leader, a citizen of influence, a man of some power among men of all classes.

It is preposterous to suppose that such a man can be secured for $600 a year. Many county superintendents could do good work if they could devote their entire time to their work. But in only twelve states of the thirty-eight having county superintendents is this opportunity given to the superintendents.

Outside of the larger towns and cities, a large part of the educational supervision, including examination and licensing of teachers, is done by people who do not even belong to the teaching profession. Indeed, the average county superintendent cannot depend upon his salary for support. If he is a man above average ability either in the teaching profession or another profession, he will receive the smaller part of his income from his supervising work; therefore this work, which ought to command the highest order of ability, must necessarily be considered by the supervisor of secondary importance to his main occupation. Any system which does not propose to keep the supervisor engaged in public educational work of some kind for all of his time will certainly fall short of our necessities. What we need in every county is an educational evangelist who, in addition to his power to train teachers and inspect their work, has especially the power to arouse people and cause them to cease trifling with the great question of education. He should be able to present in a popular way the truth that teaching children is the most delicate and important work undertaken by the state or the individual, and, just beside that truth, he ought to be able to show, as he can from labor reports, that there is no kind of work calling for skilled laborers in wood, iron, stone, or other raw material for which the public is not willing to pay from two to three times as much as its pays for the teaching of its children.

There is not so much need among us for a new system of supervision as there is for more skill and power in the execution of the systems we have. In the South effective supervision demands a county supervisor who can build up the school system, instruct, license, and inspire teachers, and arouse all classes of citizens to see their duty and their opportunity.

If such a supervisor cannot be secured for each county with our limited means, let two or more counties be united into a larger district. I should even prefer one effective, strong worker for ten counties to ten or more feeble supervisors for the same territory. For ten times nothing is nothing, but one-tenth of one is something.

DISCUSSION

OTIS ASHMORE, superintendent of schools, Savannah, Ga.—While the supervision of the common schools theoretically and primarily deals with the direction of the school work proper, it involves practically two other vital questions, which lie at the foundation of all successful school work, namely, the financial support of the schools, and the selection and training of teachers.

Theoretically and economically the school supervisor should not concern himself greatly about the financial maintenance of the schools. A wise and liberal legislation, supported by an intelligent and progressive public, should look to this. But legislation is not always wise or liberal, and the public is too often ignorant and unprogressive; hence it is necessary for the school supervisor to arouse public interest in education and direct the proper legislation for the support of the schools. This implies a rare combination of tact, energy, and wise statesmanship, together with a broad and practical professional education.

One of the most immediate needs in educational progress in the South is better schoolhouses. The majority of our country-school buildings are a disgrace to this age, and the supervisor should arouse and direct a better public sentiment for their improvement.

Before much material improvement can be made in the common schools, better teachers must be provided; for, after all, the real vital forces of a school must emanate from the teacher. But this most desirable gain depends very largely upon what the public is willing to pay the teacher, for it is quite evident that the great economic law of supply and demand must operate in matters educational as in matters commercial. Any efficient school supervision must presuppose the successful operation of a public financial policy commensurate with the reasonable educational needs of the community. To the creation and operation of such a policy the supervisor must give his wisest and best thought.

But even under a liberal school administration it is very important that the efficiency of the teachers be constantly increased. Normal schools are doing great good, and I trust that we may feel more and more their great uplifting influence upon our teachers; but it must be remembered that we have a large class of teachers who could not attend a normal school if they would, and another large class who would not if they could. These must be reached; the former by the *up*lifting hand of the supervisor, and the latter by the *out*lifting hand of the school board. The summer institute is potential for much good, and these meetings should be wisely planned and directed. In these institutes principles and methods should largely predominate, and the garrulous "exspurter," as we call him in Georgia, should give way to a practical educator who knows how to stay down upon the earth, while he induces the teachers both to think and to act.

One of the great forces for improving the teacher is a course of professional reading, wisely directed. Here is a wide and fertile field for the supervisor. A small, central, circulating library of professional books, if used aright, will work great good. Thru a well-directed co-operation and a small annual fee a good library can soon be collected, and the beneficial results will soon be apparent upon both teachers and pupils.

Teachers should be encouraged to attend teachers' associations; for, aside from the new educational thought gathered at these meetings, the contact with fellow-teachers encourages and inspires, and begets an *esprit de corps* that unifies and energizes the entire educational forces of the state.

But the technical and difficult function of school supervision is in directing the internal work of the school, and upon this point my limited time will permit me to speak but very briefly. Right knowing is a necessary prerequisite to right doing, and unless the supervisor knows *what* should be done and *how* it should be done, his work will be a case of the blind leading the blind. Alas, how many, both supervisors and teachers, are already in the ditch! To direct others wisely, we should know how others are directed where success is marked. This involves reading and study, and also occasional visits to the best schools of the country, for practical illustrations are the most convincing. It would be money in the public pocket if every school superintendent in the United States were compelled, at least once a year, to visit at the public expense some of the best school systems of this country; and I would specially include those superintendents and supervisors who already know so much that they cannot learn any more, for we would then have more school life and less educational dry-rot than we have now.

Much of the loose supervision consists in ill-defined plans, both in matter and method, and in a failure on the part of the supervisor to lay clearly before the teachers just what he wishes to be done. This involves a well-digested plan of school operations, a wise course of study carefully adapted to the conditions affecting the educational interests of the community, and frequent visits to see that these plans are faithfully executed. The superior efficiency of a supervisor will reveal itself on the occasions of these visits in the value of the suggestions given to the teacher, and upon the encouragement and help in this manner rendered.

Then, briefly, the best supervision of our common schools must look :

1. To the financial support and the physical equipment of the school.
2. To the improvement of the teaching force.
3. To the direction of the internal work of the school.

These functions require knowledge, skill, and tact, and the far-reaching results upon our national life deserve the sincerest thought and co-operation of our wisest men and women.

CAPTAIN GEORGE LE ROY BROWN, United States army, University of Tennessee, Knoxville, Tenn.—I have traveled about a great deal in the rural districts of east Tennessee and other parts of the country, and I desire to speak of a matter that appears to me vitally important and easily rectified without money, and yet is priceless in its results.

As a rule, the country schoolhouse is located on a site that cannot be utilized for anything else. All the surroundings are bleak, bare, and primitive. Why should not the schoolhouse and the school grounds be made beautiful ?

The homes are made beautiful for the children by loving mothers, and the school should receive like attention. It might be well to elect lady school supervisors to have charge o this feature of moral education.

I do not think we grown people realize fully the lasting impression made upon young minds by environment. I know that, for myself, I cherish among my happiest memories impressions, pictures upon the mind, made by the environment of childhood.

As this question calls for no money and is of easy practical solution, I feel that it ought to receive careful consideration by educational leaders.

J. S. WILSON, St. Elmo, Tenn.—Our brother has presented a somewhat gloomy picture of county supervison in the South as compared with county supervision in the North, and yet, perhaps, not more gloomy than the facts warrant. I have found some comfort in remembering that a little more than a half century ago, when Horace Mann delivered those educational lectures which aroused the people of Massachusetts to a due sense of their obligations to their children, he often had only about a dozen hearers, but the seed was sown on good ground, and it brought forth a hundred fold.

County supervision in the South owes its existence to the people; to the voter; yes, to the parents; and I am persuaded that, if those appointed to that high and responsible office will impress the southern people with a due sense of the importance of this office, show them that it is the means of securing good schools, they will respond with that liberality which will place real education in this high position.

We are gradually, tho too slowly, getting away from that old, tho barren, idea that anyone can teach school. Teachers, like the great apostle of the Gentiles, should magnify their office ; for to be a true teacher is to fill the highest office under heaven.

WHAT THE NEGRO GETS FROM THE COMMON-SCHOOL EDUCATION, AND WHAT HE GIVES TO IT

BY HON. G. R. GLENN, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, ATLANTA, GA.

The financial answer to this question is comparatively easy. Since the war the negro has received from the common-school fund of the

South about $100,000,000. He has contributed in the way of taxes not exceeding $20,000,000, and, according to some estimates, not over $10,000,000. Unfortunately, the figures in many states of the South are not separately kept. It is absolutely safe to say, however, that the negro has received $5 from the common-school fund in every case where he contributed in taxes $1. In Georgia the entire taxable property of the state for the year 1897 was $412,000,000. The negroes returned of this amount about $15,000,000. The amount of property owned by negroes in Georgia will be found to be considerably larger relatively than the amount which they return in other southern states. In Georgia the amount of money which the negro pays to the school fund on his taxable returns, together with his poll tax, which in this state goes to the school fund, does not exceed one-tenth of the school funds of the state.

In North Carolina there was raised last year from taxes for schools, by the whites, $402,829; by the negroes, $14,708. In North Carolina the negroes own taxable property amounting to $880,074, which is about one-twenty-ninth of the taxable property of the state.

By any comparative estimate that may be made, from a financial point of view, the negro receives a great deal more from the school fund than he contributes. No people under the shining sun have ever shown such magnanimity in dealing with an inferior race as the southern people have shown to educate and uplift their former slaves. The history of mankind does not furnish anywhere a more notable example of liberal and loyal generosity. In spite of misrepresentation and censure, growing out of misapprehension on the part of the people living away from the South, the southern people have borne, and still patiently bear, with a sublime and matchless heroism, a burden which never was undertaken by any other people under the bending heavens. The desolation and poverty of this entire section at the closing of the war may not inaptly be represented by the picture of want that was left in the wake of Sherman's army from this city to the sea. The torch and the sword did not leave enough, as one has expressed it, "to feed a crow." Mr. Sumner himself described the situation when he said: "The war has left nothing in the South but men and dirt." If there had been left in the South only the Anglo-Saxon race, the solution of the problem would have been less difficult; but the people of the South had not only to face the destitution of their own people, but the absolute helplessness and want of 4,000,000 of people of an alien race. Every bond of sympathy and every appeal of humanity demanded that they should extend a helping hand to these helpless people; while every demand of self-interest and every prejudice of racial inequality demanded that they should leave the colored man severely alone. The southern people were not long in choosing which course they would pursue. They have already undertaken the educational uplift of that race. Unaided by the government that set the negro free, they have opened a schoolhouse to every black child below the Ohio river. Accepting the truth of history, that ignorance has never been anything else but a curse to the people who are ignorant, the southern people have labored patiently and loyally with their black freedmen, until they have reduced the illiteracy of these people, in thirty years, nearly 50 per cent. There is nothing to match it in the history of people or nation.

In the working out of this untried experiment the South itself is learning a great deal that will be of value to the entire nation. Ignorance anywhere, in any race, under all conditions, is dangerous. A cubic foot of poisoned air placed anywhere in this large tabernacle will diffuse itself, by nature's law, until it has poisoned every other cubic foot of air in this building. If there be poison anywhere, it is dangerous on this account. When the poison is once out, it cannot be overtaken and confined. The poison of ignorance is not only dangerous; it is also insufferably expensive. We have discovered in the South that a schoolhouse is cheaper than a jail. Sad experience has taught us that it is better, from a financial point of view even, to save every child, white and black, than it is to lose one of them. We are making our common school more and more the nursery of the republic. We have demonstrated to the world that the negro can be made a useful and a valuable citizen. We have shown conclusively that to leave him in ignorance and abandon him is to make him a standing menace to everything that we hold dear in this land. We have shown, further, that the negro is not only teachable, and susceptible of the mental improvement characteristic of any other race, but his kindly, sympathetic, and loyal disposition may make him a most valuable aid in working out the industrial problem of the South. In the providence of God it may turn out to be a fortunate thing, for the negro even, that his lot has been cast with the patient and chivalrous cavalier rather than with the cold and calculating Puritan. At all events, the South is once and forever committed to the policy of extending a kindly and helping hand to the children of the negro race. We shall redeem these children, just as the children of all other peoples have been redeemed from the curse, by the benign and holy influence of a Christian education.

I know it has been said, and frequently of late it has been printed in the papers on the other side of Mason and Dixon's line, that the education of the negro is a failure. One bold writer in a northern review recently stated that one of three things must happen to the negro: he must be exported from the country, reduced to slavery, or put to death. The South will not be a party to any one of these alternatives. It is also charged that crime by the negro race in the South has been more rampant in the last decade than ever before. These critics remind me of an incident that occurred in the lobby of a leading hotel in the city where I live. Two drummers were discussing a man who has a national reputation. One of them said: "Well, you must admit that he is a very smart man. He attracts the people everywhere, because he knows so much." "Yes," said the other drummer, "that's true, but the trouble is he knows so much that isn't so." The trouble with those writers and speakers who solemnly declare that education has not helped the negro is that they know so much that isn't so. Such products of education as Booker Washington, Professor Council, Professor Adkins, Bishops Gaines and Turner demonstrate beyond cavil that education will do for the negro race what it has done for every other race among the children of men. It may be that crime is on the increase; but I can prove more conclusively that crime is on the increase in New York, in Chicago, and Philadelphia, than any intelligent man can prove that crime is on the increase among the negroes of the southern states. If crime is on the increase anywhere, it is because the right kind of intelligence is not on the increase. Almost without exception the negroes who commit horrible crimes in the South are ignorant, and brutal and vicious because they are ignorant. Intelligent negroes have never been known to commit this class of crime. The penitentiary records of my state show, furthermore, that nine-tenths of the negro prison population cannot read and write. If statistics teach any lesson at all on this subject, they teach that the negro has received and is now receiving a great deal from education that not only benefits the members of his own race, but makes life and liberty, and the pursuit of happiness, safer for all people of this country. Besides, it is unwise and unfair to compare what the negro has done in thirty years with what the white race has accomplished in four hundred years. It is absolutely safe to say that no race of people under the sun, starting in illiteracy and without property, has ever accomplished more than the negro has accomplished in the way of reducing the illiteracy of his race, and in the accumulation of property, since he has been set free. Unaided by the white race of the South, of course, it would have been impossible for the negro to have accomplished so much. In this connection it ought to be stated, over and over again, that it was little short of a crime on the part of the general government not to have aided the southern people in carrying the enormous burden that the ignorance and helplessness of the newly enfranchised race imposed upon them. Private beneficence on the part of patriotic individuals and denominational associations in the North have established a few schools for the higher education of the negro, and to those who have helped in this way belongs unstinted praise. Among the noblest benefactors of this class stand Peabody and Slater, whose generous and patriotic gifts stand out in bold relief. The perpetual income from the princely gifts of these lordly men come like the free, glad waters of a perennial spring to enrich and gladden the waste places of the South. But the Congress of the United

States, that set the negro free, has done absolutely nothing in the way of contribution to the common schools of those states that have had to bear the brunt of the hazardous risks which his freedom along with his ignorance imposed. I believe that the Blair bill was one of the most patriotic measures ever offered to Congress, and that its defeat was not only a calamity to the southern people, but a calamity to the nation as well.

But in spite of all the croaking, doubt, and skepticism as to the benefits of education to the negro, those who have studied the question thoughtfully and seriously, on the ground where the experiment is being worked out, have no longer any doubts or any fears as to the results. The intelligent and far-seeing people of this country are beginning to see that the negro can be made a most potential factor in the industrial revolution that is rapidly going on in the South. As Dr. Harris so well and wisely says in one of his reports: "We are rapidly moving now to the age of the machine. One machine, under the control of the intelligent brain of the operator, is accomplishing now that which it took a hundred hands to accomplish a few years ago." The machine is making its way rapidly to the farm, to the forest, to the mine, and to the workshop. Intelligent labor will be the only kind of labor that the world will want in a few years from now. The day of the mere drudge is rapidly passing away. The negro himself is beginning to realize that he must be an intelligent laborer, or he will not be wanted anywhere. The southern people are rapidly coming to see that it is cheaper for them to spend money in making the negro intelligent and useful as a citizen, and capable as a worker in raw material, than it is to allow him to grow up in ignorance, and become vicious by reason of his ignorance, and a costly burden as a criminal. The southern people are realizing, as never before, that it is easier to raise a tax to build a schoolhouse than it is to raise a tax to build a jail and a penitentiary. We have exhaustless raw materials in the South. We need intelligent labor to work up these raw materials into manufactured products that the world wants. Intelligent and skilled labor, applied to this raw material, will make the southern people the richest people on the face of the earth. Hitherto this raw material has been shipped away from the South to have the intelligence of Massachusetts, Rhode Island, Connecticut, and other northern states stamped upon it. We shall use the negro and the intelligence that we have developed in his race to work up this raw material here in the South. We shall rapidly convert water power into electric energy. We shall plant a machine-shop and a cotton factory at every railroad station, and in a very few years the northern visitor to our section shall measure his railroad miles by the towering smokestacks that catch the first sunbeams of each new day.

It may turn out, after all, that the negro may prove to be a blessing to the southern people. Naturally the negro is patient, kindly, sympathetic, and loyal. As a laborer he is easily controlled. He never strikes. He needs only the intelligent industrial and moral training which in this day and time must be given to any class of labor to make it trustworthy and profitable. Before the war, as a slave, he made his white master rich. Who knows that he may not again, as an intelligent freeman, make the southern people rich? We would not exchange him for the class of labor, godless, homeless, and countryless, that is dumped into America at Castle Garden. As the negro shall acquire intelligence, as he shall possess a home of his own, along with these he will learn to produce something that the world wants. That is a glad hour in the life of an individual, or in the life of a race, when the consciousness of ability to produce something useful is born. This hour can come to any man or to any race only along the way of mental and moral growth. When this hour shall come to the entire negro race, there will be no longer any race problem in the South. The negro, with his intelligent use of the machine, with the mixing of his brain with the soil of his native clime, will learn to sing a new melody as he toils with skillful hands in field and workshop and mill. This new melody will mingle the sympathetic tones of the old plantation song with the notes of hope which intelligent industry and thrift will bring into his life.

The North has had her day of triumph and prosperity. Thirty years ago, after a fearful fratricidal conflict, the North was declared victorious in the conflict with bayonets. But in the next thirty years, in a more fraternal conflict, the South will win her triumph with cotton spindles. If the negro shall become, thru intelligent training, a potential factor in this generous rivalry for industrial dominion, the North can have no reason to repine, and the South will have no cause for regret.

REPORT OF THE COMMITTEE ON A DETAILED PLAN FOR A REPORT ON ELEMENTARY EDUCATION

BY PROFESSOR JOHN DEWEY, UNIVERSITY OF CHICAGO, CHICAGO, ILL., CHAIRMAN

In his paper of last year, Dr. W. N. Hailmann indicated the point of view which has controlled the discussions and the considerations of your committee in formulating the following report.[1] As that paper puts it, school instruction and administration must grow out of the pupil's experience; must remember that its object and goal are found, not in itself, but in enriching the child's life experience, and furthering his powers of self-expression and achievement; and that this development must be conceived as social—"the sympathetic co-ordination of individual purpose with that of others in common social endeavor, and in active mutual devotion to worthy universal ideals."

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[1] *Milwaukee Report*, 1897, p. 199.

This conception of the relation of school work to individual growth has formed the point of departure of the following report. Such an inquiry obviously rules out investigation of general pedagogical principles on their own account, and equally rules out investigation of the details of school instruction and administration, so far as these operate merely to increase knowledge of such subjects or increased facility in the use of certain school arts. It includes consideration of both details and principles, so far as they have to do with the conduct of the school considered as an intermediary and instrument in the development of the child himself. This limitation, of course, means no depreciation of the value of the former considerations. It merely states the confines, theoretical and practical, within which the work of this particular committee is contained.

The following report deals:

I. With the general spirit and aim of the proposed investigation.

II. With the general character of the methods to be pursued in reaching this aim; and

III. With suggestions regarding the specific methods to be employed. The latter point is again subdivided into recommendations as to method on the practical or administrative side, and suggestions regarding method on its intellectual side.

I. *Spirit and aim.*

Any proposed investigation which requires the expenditure of time and money should grow out of some specific need in the existing situation. If undertaken on merely general principles, it is foredoomed to failure. Moreover, the exact nature of the particular need dealt with determines the peculiar character of the inquiry undertaken. We assume, therefore, that the best introduction to the recommendations which ensue is in the statement of the needs of the present educational situation in this direction.

A word of caution may, however, be in place. It is not for a moment meant to intimate that any conscious knowledge of the conditions and principles to be set forth is possessed, or need be possessed, by the teachers concerned. We wish merely to indicate, from a general standpoint, some educational changes that are going on, together with their reasons; to suggest that these have a deep-seated cause and significance; and to intimate further that, since the main phases of the problem are common to all who are working in educational interests, the experiences of those who have been most successful cannot fail to be serviceable to others. We aim simply to put the educational changes in their general social perspective.

It would undoubtedly be an exaggeration to say that we are in an educational crisis. But it is within the bounds of sober reason to say that educational materials and methods are undergoing a decided readjustment, and that, along with positive steps in advance, a certain amount of confusion and uncertainty is attendant upon the reconstruction. The change in the educational system is nothing for which educators and teachers are responsible as individuals. It is the reflex of a general social change; it is evidence of the fact that, whenever other social institutions and forces change, the school, as one among many social institutions, must change also. This change, while in part an effect, becomes also in turn a cause. The school does not passively accommodate itself to exigencies forced upon it from without, but has its own social function which requires it to take a position in actively determining the movement of other social forces.

Out of the large number of tendencies which are operative in modifying the conduct of the school, the following may be noted:

1. There has been a tremendous enlargement of the educational equipment, of the resources which are available in the instruction of the young. The last century—yes, almost the last generation — has set free for general use a large number of valuable instruments, formerly only either in the possession of a few, or themselves so crudely developed as not to be educationally available. This increase in equipment is due, in

the main, to two reasons: the growth of science, both as pure and, more especially, as applied to life in inventions and industries; and to the democratic development which has brought within the scope of every individual opportunities in art, practical achievement, and scholarship, previously open only to the few.

What some term the enrichment of the curriculum, and others its congestion, is simply the reflex of this social development. History, literature, science in the form of nature study, the arts of music, drawing, painting, various forms of manual training, and now, for the upper grades, elementary algebra, geometry, and one or two foreign languages, have been included within the range of elementary education. They are there either as excrescences, as external attachments, or as organic factors which will not only do their own work, but reinforce the value of all the educational factors. According as the relationship takes one or another form, the so-called "new" education means either congestion of the pupil, his distraction and over-stimulation, or else the orderly development and enrichment of his life.

2. Hand in hand with this increase in the educational tools available has gone, of course, an increase in the demands made upon the school by society. The growth of democracy has furthered the necessity of training, not only social obedience and conformity in ways of good citizenship, but also of active leaders in social and political lines. Moreover, the revolution in the industrial sphere, consequent upon the introduction of machinery and the facilitation of modes of social intercourse and communication, has created a demand for knowledge of the scientific processes and facts involved in modern manufactures and commerce. It requires sufficient practical acquaintance and sympathy with conditions of work to enable the pupil to assume, upon leaving school, an intelligent attitude toward these forces, which are fast becoming controlling ones in life. This response must be active as well as passive. New inventions follow each other so rapidly that the individual who can only passively conform is sure to be left behind in the industrial readjustments consequent upon changes in machinery, and in methods of doing business. Unless he is to sink down to the level of semi-dependent, unskilled laborers, or else become an object of charity, or even a criminal, he must be trained to such power of using his own intelligence as will enable him to keep his own feet, and help determine his own career.

3. The democratic development, once more, has tended to make the child more and more an end in himself. He is now seen to be a personality, not merely in germ or potentially, but actually. The same social movement which has transformed slaves and servile laboring classes into persons who are ends in themselves is affecting also the status and claims of the child. That such a movement is fraught with danger, as well as with responsibilities of higher achievement, there is no need to argue. Unless this tendency is adequately directed, it can mean only still greater disintegration of the family, and the uprearing of youth who are undisciplined, demoralized, and who know no law excepting that of their own whim and momentary interest. But the growth of the psychological sciences has given an added means of insight into child nature, so that along with the new demand there has come the power of meeting it. Upon the school, however, along with the family, falls the fundamental responsibility for the adjustment of problem and response. Here, or nowhere, must the adjustment be made. The whole matter of the relationship of school methods and materials to the positive development and direction of child life is ripe for consideration.

These various phases of social growth have imposed upon the school new duties which, partly by instinct and partly by purpose, it is attempting to meet. It is endeavoring to see to it that the society which is in process of forming shall be met by an individual prepared to take his place actively, as well as passively, within it. To secure this end, it must use all the instruments put at its disposal, and use them in such a coherent and definite fashion that they shall be really serviceable — neither mere fads, nor mere extraneous devices for arousing and stimulating interest in the older and more routine studies, but intrinsic tools in the development of the whole child nature.

Various communities have felt the demand with varying degrees of force, and, owing to local and variable elements, have met it with varying degrees of success. Some time or other, however, the demand is sure to become universal. It will have to be met in both country and city, in both manufacturing and agricultural districts, and in slums as well as in the sections more favored with wealth and culture.

Here we have the particular problem set for any work of investigation to be done along these lines. It is to gather up the results which mark the higher points of achievement in this direction; and to organize these in such a way that they will be put at the disposal of other teachers, thus illuminating the work of all and economizing their time and effort by showing channels of successful endeavor.

In certain schools the necessary readjustments are already fairly under way. They have not been made in the light of any general considerations, such as those already set forth, but on account of the immediate requirements of the local situation, thru the instinctive tact, sympathy, and good judgment of teachers in perceiving and meeting the concrete wants of children; or, if originally suggested by theory, have long since lost any merely theoretical character thru the test of application to working conditions.

The opportunity then, and the demand, is to gather together material of this sort, to sift and compare it so as to see the direction in which it is moving, the principles which are embodied in it; and then to present the results in such fashion that most successful attainments of the few in adapting the work of the school to the needs of child life shall become available for all.

II. *Method to be pursued.*

1. It follows from this survey of the relation of the proposed investigation to the existing educational situation that the discussion should be inductive and experimental rather than dogmatic or deductive; it should be an inquiry, not a mere exposition. It is no reflection upon the existing science of pedagogy to say that it is very far from being in a perfect condition, even as regards its more general principles. Even these can be assisted in their development by being brought in touch with the experiences which have resulted from the sympathy and practical intelligence of our best teachers. Pedagogy, as a science, cannot afford to despise that direct contact with experience which fructified all other sciences.

Aside from this, general principles may exist, and yet be practically useless thru lack of adaptation to the day-by-day work of the school. There is too frequently a yawning chasm between the realm of general principles and the details of school routine. While professedly and officially the latter may be regarded as derived from the former, as matter of fact, they may be, in large measure, survivals due to the mere inertia of custom, or empirical devices having no justification beyond their success in accomplishing some external and temporary result; or they may be evidences of the persistence and energy with which some educator has imposed his particular notions upon the school system — products of one of those waves that periodically roll across the country.

What is needed from the standpoint of general pedagogy is that the routine work should be really illumined and interpreted by organic connection with general principles, while the general principles need to be vitalized, kept fertile and flexible, thru adaptation to detail. Our most pressing need is to escape from the current dualism between general principle on one side, and empirical routine and rule of thumb detail on the other. Such an investigation as that here suggested cannot fail to promote this vital interaction of theoretic principle and practical detail.

After the conquests of the inductive method in all spheres of scientific inquiry, we are not called upon to defend its claims in pedagogy. The burden of proof certainly lies with those who would proclaim in advance the sterility of such a mode of procedure.

What would be thought of the botanist who should refrain from a study of concrete plants and their parts, on the ground that he could collect merely a multitude of empirical details which would be scientifically and practically valueless? Such a position can only argue a distrust of the general principles which are nominally professed. The more tenaciously one holds to the general principles and their value, the more sure he may be that an investigation of the most successful educational work will bring to light those principles, not in bare abstract form, but clothed with the authority of operative success; not as universals separated from practice, but transfigured thru their embodied application in effecting their ultimate purpose — the life development of the child.

2. There need be no hesitation in admitting that it will be a matter of considerable difficulty properly to organize and to present the results attained in this inductive investigation. Two extremes, equally dangerous, would have to be avoided. On one side there is the danger of reading into the collected material *a priori* principles, thus reducing the material until it fits into the rubrics of preconceived ideas. Such a method would give the appearance of organization, but would be fatal to the whole undertaking. On the other side there is the danger of presenting a crude mass of undigested particulars without reference to principle. This would merely overwhelm teachers by the mere bulk of data amassed; or, if used by them, would be likely to lead only to imitation of the letter without insight into the spirit.

While admitting the possibility of such misuse of the material, the committee by no means thinks this result probable, much less inevitable. Certain principles may be suggested which tend, in the first place, to control the amount and character of the data collected; and, in the second place, to assist in its proper interpretation.

(*a*) With reference to limitation on the side of material collected, the following principles may be laid down. The traditional routine of the school is taken for granted. So far as this is inquired into at all, it is (as will be indicated farther below) simply for the sake of indicating the conditions under which other work is done. The inquiry presupposes the running of the existing school machinery as found in the average, or more than average, American community. In thus taking it for granted, the inquiry is relieved of the necessity either of justifying or of attacking it. The only question is as to the special use of this machinery in the one direction of furthering, instead of restricting, the immediate life experience and vital growth of the child. This limiting principle allows us at once to rule out an immense amount of detail which would otherwise tend to congest the inquiry and obstruct its systematic interpretation. Such material is indeed valuable, but it is not relevant to this particular inquiry.

Another application of this limiting principle may be indicated as follows: The inquiry has nothing to do with school methods or devices from the standpoint of facilitating the mastery of a given subject. Here, for example, is a school which is unusually successful in securing ability to read at an early age. Here is another noted for its success in enabling children to manipulate number with unusual dexterity and accuracy. With such matters the proposed investigation has absolutely nothing to do. Inquiry into the relative merits of the phonic, word, and sentence methods, or of any variation of these, or of this or that particular method in arithmetic, lies quite outside of its view. It is well to have such matters taken account of, and made known to the public thru the medium of educational journals, etc.; but the aim of the proposed investigation is to discuss methods from the standpoint of enlarging and enriching the immediate experience of the child, not of furthering the acquisition of knowledge or of school arts. This principle restricts the amount of data available by defining the precise kind wanted. As respects reading and writing, for example, not that is relevant which tells how the child learns to read most rapidly and accurately, but that which indicates how the capacity to read is utilized in the moral development of the child and in enlarging his horizon. What is there in the school life and methods of instruction which promotes the reading of good literature, and which facilitates the application of what is read to the child's own growth? So in arithmetic, not methods of teaching number are important, but the ways in which the child is led to conceive and utilize number relations in enriching his everyday experience.

The same general principle may be applied to any theory. Suppose, for example, it is the matter of correlation. Here the problem for consideration is not success or advisability of correlating one subject with another, but vital connection of the subject with the life of the child as it shows itself at home and on the playground, in his daily, non-scholastic occupations. It is not correlation of geography with history or with arithmetic which is in question, but correlation of geography with the child's daily experience in such a way that the instruction of geography grows out of it and in turn illuminates and interprets it.

(*b*) There is, moreover, a limiting principle on the side of organization of results. The whole question is that of organic relationship to the development of the child. While we are far from knowing as much about the latter as is desirable, we are, thru the development of physiology and psychology, now in possession of certain general principles which will serve as touchstones for the material collected. After it has been found *that* certain methods and materials actually facilitate vital growth of pupils, much can be done in telling *why* they do so. It is quite probable that these psychological principles could not have been applied in advance to prophesy or to deduce such results. But the results, once presented, can be thrown into relief and illuminated by means of psychological principles. The results obtained are, we may repeat once more, largely the immediate outcome of the instinct and sympathy of individual teachers. But once attained, they can be restated and interpreted in the light of larger principles, even tho the latter would originally have been quite impotent in obtaining them.

It is not meant, of course, that this work of interpretation is to become a dominant factor in the final presentation. The psychological principles are to be used rather than exhibited. They are to be used in giving the material a coherent and orderly arrangement along lines which will enable the teacher to grasp the salient features of the methods reported upon; and, by getting insight into the reasons for their success, be freed from the necessity of servile imitation. Thus the confusion attendant upon the mere accumulation of data will be avoided; and other teachers, by grasping the results reached in their organic connection with the principles of mental and moral development, will be able to utilize them freely, by making adjustments freely to the needs of their own particular situation.

III. After this survey of the general character of the proposed inquiry, and of the spirit of the method in which it is to be undertaken, your committee would make certain suggestions regarding the practical methods of carrying it out. Under this head we shall have something to say concerning both the administrative conduct of the inquiry and concerning the particular points to be got at upon the educational side.

A. *Administrative aspects.*

1. The investigation should be undertaken by a committee possessed of complete discretionary power, under the limitations of the particular task imposed upon it by your body. This committee should be large enough and varied enough to secure representation to a variety of points of view, not only of pedagogic theory, but of practical experience. Moreover, it should be wide enough to take in the entire country.

2. While a large committee is indispensable in order to meet the needs outlined above, there should be a smaller central committee in order that the inquiry may be prosecuted with system and method. This should serve as a directing body from which instructions could proceed, to which reports could be made, and upon which should fall the responsibility of final collation of results.

Accordingly your committee would suggest some such scheme as the following: A committee of thirteen to be appointed, of whom four shall constitute a central committee, while the other nine shall be district representatives selected from particular geographical units in such a way as to cover the whole country. Each one of these nine district representatives to be regarded as a chairman of a subcommittee, and to be authorized to appoint district conferees to enable him successfully to prosecute the necessary inquiries in the region assigned to him. The central committee should act upon the data thus turned in. The inquiry should occupy at least two years, and the possibility of an extension to three should be definitely contemplated. The inquiry should be prosecuted patiently and persistently, with sufficient time for collection of data and their subsequent collation, or else it will be useless. In order to accomplish this, the National Educational Association should be asked for an appropriation for the expenses of the committee. The sum should be sufficient to cover, for the first year, the services of a stenographer for the central committee, expenditures for printing, postage, etc.; and the second year enough to cover the same items, together with the services of a secretary, who, under the direction of the central committee, should carefully work over the material.

B. *Educational aspects.*

Your committee has given more time and thought to considering the details of the proposed inquiry with respect to the points upon which information should be sought than to all other things. The committee has been subdivided and various portions of the field assigned to various members. Superintendent Jones has taken the general conduct of the school in relation to child development; Superintendent Dutton, the æsthetic phases of school work and the relation of the school to other educational factors of the community; Miss Arnold, the subjects of the primary curriculum; Mrs. Putnam and Miss Brooks, the general spirit and conduct of kindergarten and primary work, both in themselves and in their vital adaptation to each other. After consultation, it seemed wise to throw the points for investigation into the form of specific inquiries, preceded by a brief statement of the general problems involved. A conspectus of such statements and inquiries will follow. This will constitute the real heart of this report. To this the foregoing statements are preliminary. It will indicate, with as much definiteness as we have been able to attain, in advance of any actual investigation, the main lines along which work should be directed. As developed by any committee your body may further appoint, it will set the main topics for investigation.

QUESTIONS BEARING ON THE PROPOSED INQUIRY

In current civilization there are growing demands upon the school for increased vital connection of the school work with the requirements of this civilization.

There are evidences that teachers in their work are responding with varying success to these growing demands.

Analyzing in a large way, the efforts of teachers may be grouped as follows:

1. Efforts to base the work of the school upon the pupil's experience.
2. Efforts to systematize the extra-scholastic experience of the pupil, and to supplement this with an ideal experience that shall lead him in his life onward and upward.
3. Efforts to secure the completion of mental acts in actual achievement, thereby fixing them in his organization, building up character, as well as purifying and enriching heredities.
4. Efforts to utilize character so gained and to secure for it attributes of devotion and benevolence by expanding individual purpose into social purpose; directing individual purpose-life deliberately toward healthy co-ordination with the needs and aspirations, the ideals and destinies, of social groups.

The opportunity and the demand are to gather together material of this sort, to sift and compare it in order to find the direction in which it is moving and the principles embodied in it, and to present results in such a fashion that most successful attainments of the few shall become available for all.

This is the purpose of the proposed inquiry, which is to be strictly inductive and experimental.

Such inquiry includes consideration of matters relating exclusively to the traditional school routine, of special methods and devices, of correlation of studies and discussion of psychological principles.

Yet such principles may be used in giving the collected material a coherent and orderly arrangement along lines which will enable the teacher to grasp salient features of the work reported upon, and to get insight into the reasons for their success, thus freeing him from the necessity of servile imitation.

FIRST SERIES

1. What is done to ascertain the general knowledge and skill of the child on entering school? the character of his home environment? his tastes, predilections, disposition, hopes, and aspirations?

2. To what extent and in what ways does the school consider, utilize, encourage, modify, or correct these things?

3. What efforts have been made, and with what success, to organize the interests of parents in the schools?

4. In what ways does the school utilize the observation of things and phenomena on the part of pupils, in and out of school, in the preparation of lessons and in recitations?

5. How does the school utilize unusual occurrences and interests in the work? How does it utilize public festivals?

6. To what extent are play, and other school exercises partaking more or less of the character of play, used for idealizing and extending the child's knowledge concerning the industries, commerce, and other phases of community life?

7. What uses are made of school excursions? of travel on the part of individual pupils?

8. Please state your experience with school gardens and window gardens. Are there other opportunities for the care of animals and plants?

9. In what ways does the school consider the child's scope of æsthetic appreciation, and stimulate the same for further extension, in the adjustment of his school environment? in the ornamentation of grounds and buildings? in the selection of photographs and engravings, etc.?

10. What opportunities are afforded, in the school or elsewhere, to hear good music? How does the school utilize these in its work?

11. To what extent do stories told the children rest upon their own actual or probable experience? In what ways are they used to stimulate observation, research, imagination, purpose, and aspiration?

12. In what ways is the child's home, community, and school environment utilized in primary lessons in number? form? nature study? language? drawing? reading and writing?

13. In what ways does the school utilize experiment and more or less independent research in securing data and in the formulation of general facts or laws?

14. What progress has been made in equipping the school with workshops, laboratories, and school gardens?

15. What progress has been made in equipping the school with drawing outfits, musical instruments, libraries, and reading rooms?

16. In what ways do the various studies and exercises, as carried on by you, stimulate original investigation, a spirit of research, æsthetic appreciation, and a healthy imagination? Please answer this question more particularly with reference to reading, form work, and nature study.

17. What is the character of reviews? How often are they held?

18. Please send samples of written records of the pupils' and teacher's work, plans of observation, course of study, time-tables, and specimens of children's work.

SECOND SERIES

1. In what ways are the gains of one lesson utilized in other lessons or exercises? number and form in constructive work? the pencil and brush in nature study, essays and reports, geography and history, etc.? stories, reading, and language in consecutive, orderly narrative, description and report work—oral and written?

2. In what ways do you use kindergarten occupations, devices of "busy work," as well as, later on, the sloyd room and the laboratory, in applying knowledge and skill gained in various subjects to particular ends?

3. In what ways are such occupations used by you in stimulating and educating inventive and creative power? in descriptive and illustrative work?

4. Which of such occupations, as used by you, have a direct bearing on number work, form study, nature study, language, etc.?

5. How far and under what circumstances is it found helpful to correlate singing and instrumental music with games, marches, with other studies and exercises?

6. In what ways does the school utilize in its work special ability on the part of pupils in oral or written expression, as well as in technical skill or art skill, for purposes of instruction, recitation, or other legitimate school work?

7. To what extent are the pupil's creative impulse and his own ideas considered in his progress toward the appreciation and control of conventional art forms?

8. By what means do you associate and stimulate a tendency to read books with a mastery of the art of reading?

9. What specific school festivals are established, and how is the work of the school related to them?

10. How is continuity of progress secured within each class and thruout the school as a whole?

11. What are the tests of advance? How often and under what circumstances are pupils advanced into higher groups or grades?

12. What means have been employed to secure continuity of effort and result between the kindergarten and the school?

13. How are marching, changes of classes, etc., managed so as to secure spontaneous good order, avoiding the establishment of a purely formal routine with arbitrary motives and penalties?

14. How are punctuality, the requisite balance of silence and communication, cleanliness, regard for school property, and other school virtues, secured on a similar basis?

15. What evidences are there that the influence of the school upon the development of the tastes, æsthetic appreciation, disposition, and aspirations of the children is felt in the homes and in the community at large?

THIRD SERIES

1. What is done in the general organization of the school to foster community spirit? to make the children feel at home? to make each child feel that he has a place in the school as a community, not simply with reference to lessons learned?

2. What opportunities are there for responsible leadership and co-ordination on the playground? in the school garden? in the ornamentation and care of the schoolroom, and of other children? on school excursions? on the way to and from school, etc.?

3. How is the recitation conducted so as to furnish motives and opportunities for interchange of experience and knowledge for the benefit of others, instead of serving merely as a test by the teacher of information acquired?

4. Under what circumstances and conditions, both as to pupil and subject, do you teach individually, in groups, or in classes?

5. How and in what exercises are children given an opportunity to enrich individual work thru an equitable exchange of products of their labor, more especially in manual work?

6. How and in what exercises are children given opportunity to contribute products of their individual chiefly manual, work to higher social ends?

7. What opportunities are children given to become actively interested in the work and pupils of lower or higher grades?

8. How and to what extent do children contribute by their art work or otherwise to the ornamentation of the school?

9. In what ways are kindergarten occupation, sloyd, the workshop, or laboratory used for co-operative work?

10. How and in what studies or exercises is division of labor secured, both in the preparation of lessons and in recitations, in research, and in applying knowledge and skill to common ends?

11. How and in what exercises do you utilize independent reading and individually prepared written reports in social school work?

12. When and to what extent are choral and orchestral features introduced in music? What influence do these exert upon the social atmosphere of the school?

13. In what ways are school festivals utilized in developing the social spirit of the school?

14. Are there evidences that attention to social phases of school work exerts a beneficial influence upon be development of strong, self-reliant individuality, coupled with a practically and intelligently benevolent attitude?

15. Are there evidences that the school, by its attention to social training, is exerting a beneficial influence upon the social tastes and tendencies of the community, or, at least, of the younger members of the community?

THE MISSION OF THE ELEMENTARY SCHOOL

BY PROFESSOR MARTIN G. BRUMBAUGH, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

By common consent, students of education are taught that the movement in education is from the thing to the symbol, from sensation to conception, from the real to the ideal, from the concrete to the abstract, from the letter to the spirit, from the realm of sense to the realm of reason, from individual notions to general notions; that the educational process is a self-enthused movement from the things of sensation to the exercise of practical and theoretic reason.

But in our practice all these maxims are rendered relatively valueless, and even misleading, since they figure an ideal process from its initiative to its culmination. In theory we take account of the whole process; in practice we never can begin the process of education. Any attempt to do so results in such a senseless over-concentration of our curriculum as to make us sponsors for the first nervous reactions to external stimuli that sweep the round of sensory and motor activity. In our efforts, therefore, to become scientific, i. e., to realize our theory, the elementary schools suffer today from a disease that, for want of a better characterization, may be called *over-concretedness*. The child has grown into an educative being. Our methods strike him dead in order to force his resurrection after some self-selected scheme of educational doctrine.

On the other hand, we do not follow the child to the realization of the ideals figured as the culmination of the educational process. Hence in many upper grades there is an opposite evil almost as fatal — *over-abstractedness.*

This evil is not so apparent, since so few attain the highest stage of organized training. But the effect is felt in the elementary school. Here all sorts of facts and truths are minced into such concrete bits that the sensible and normal child is disgusted with the whole business of education, leaves the school with a yell of delight, revels, even in school hours, in the secret haunts of bird and bloom, and drives parents and teachers to legislative relief in laws for compulsory attendance.

True, indeed, for all constructive purposes, mind must begin with the concrete and the one; but it is wonderful to note how, in spite of courses of study, schools of pedagogy, and multiplied apparatus, the child spirit gets a-wing and away from sense symbols. A child can think. A child does think. He needs no more exhortation to think than he does to eat. He enjoys the prolonged exercise of both processes. What he does need are right objects and right methods of thought. To impart right method to his thinking, and to apply this to things that fecundate, is to train the child in the theoretic and the practical reason, to create both a nature and a form in education, to impart knowledge and culture, and thereby to achieve an ethical product.

For the child, at least, the things of thought are best shaped in the feeling life — the neglected life — of the child, and his methods of thought, in spite of rigid discipline and logical method, will follow the trail over which his feelings have swept full, free, and purposeful.

It follows that the feeling life of the child, the first fruit of his intellectual activity and the best, since this directly makes for the ethical end, is of prime significance in any scheme of elementary education. This feeling life must be trained, not ignored. The first thing the elementary school must accomplish is the training of the feelings.

Since the days of Rousseau we have been endeavoring to make character, determine will, by training the intellect. Altho our psychology still deals with the emotions "in a very solemn way," our processes do not take emotional activity seriously into account. Indeed, any attempt to advance the feeling life is regarded as a direct assault upon the accepted thought-producing function of education. Children are exhorted to think. Pedagogs plead for power to think. We no longer exhort or train children to feel. Thus a false antagonism has arisen, and the clamor of the practical world is responded to by eulogizing schemes of thought exercises, and almost no effort is consciously directed to the cultivation of that warmth of interest and intensity of feeling which constitute the basis of all felicitous educational processes, the material of all intellectual advancement, especially of all training that makes for character.

We have created a pedagogical child, and we study it. We have lost the real child and the secret of his unfolding. This pedagogical child is a complex of philosophy and pedantry. It is the dream creature of visionary men and women, who spend their days and nights evolving schemes for evolving it. And as the thing itself has no existence in fact, so the theories based upon it have no direct reformative or pedagogic value.

All educational systems, great in application, were fitted to the real child, educating him for a specific purpose in a definite, if not always consistent, way.

Balzac in *Une Fille d'Ève* gives a description of the depressing education given by the countess of Granville to her two daughters. To make smooth their path to heaven and husbands, she subjected them to a régime that had at least one fatal defect — it took no account of the emotions. The result may be gathered from the story. But have we not today mothers and teachers who pursue systems of education at the cost of the pupils' emotions, that is to say, at the cost of their real happiness? We do not take account of these emotions, which are the highest part of our nature and are most impressionable in childhood.

The world of the useful is to us the world of fact. But fact has to be transmuted by the imagination before it can reach and act upon the emotions. What we need is an educational system which parallels the appeal to the mind thru facts with an appeal thru the same facts transmuted by the imagination.

In the early church schools the emotional life of the child was appropriated to religion. It was conserved for the life to be, and the meager intellectual culture of these schools was designed to organize the feeling life for action in religion. When the layman triumphed over the ecclesiastic, this emotional life was left to seek along its own avenues, by chance and accident, the comfort and strength its repose in religion gave to it, and the energy of the school was devoted to a keen intellectual awakening, resulting in a biased and, in many cases, unfortunate training. If the ideal is to shift from the life to be to the life that is, from religion to some current interest, from living to die to living to live completely, we must still utilize all the energy of the child. We must recognize the emotional life as the basis of appeal for all high acting and high thinking. We can never make men by ignoring an essential element in manliness. To live well, we must know clearly and feel keenly and act nobly; and, indeed, we shall have noble acting only as we have gladsome action — action inspired of feeling and not of thought. The church made men of great power, because it made men of great feeling.

The same is substantially true of the great Greek system, prior to the days of the Sophists. The child was trained to feel devoutly. His enthusiasm for things mounted, in its personified aspects, into religious ardor, and his love for his state became the passion of his soul. This was the state-intoxicated man. Banishment was worse than death, and service of his state the crowning act of his life. His matchless art and his exaltation of the sacred Muses are but the symbolism of a patriotic spirit, of a spirit trained almost to ecstasy in the palæstra and the gymnasium and the agora. His educational progress was measured by devotion, not by acquisition.

Over against this, modern education is becoming more and more intellectual, less and less æsthetic; and the cry of the pedagog is: "How can we make education more ethical?" How, indeed, when the very element that makes for ethical living is decreasingly significant in our educational schemes?

For keen intellectual training in the college and the university we will all plead. The career of the specialist is by no means to be decried, nor the means of its attainment to be attacked. But in an elementary school, by reason of the nature of the child, and also for the sake of purely intellectual training in the university, the educational process should enkindle in the student an increasing warmth of feeling, a keener emotional response to the things of the curriculum.

Plato is the author of the maxim, so much respected by the Germans, that "The feeling with which education begins is wonder." This comprehends the entire problem. Education begins in feeling, continues in feeling, ends in feeling, provided only that wonder is not destroyed, but organized into all forms of beauty in art and into all orders of truth in science.

This discussion leads to the exaltation of the imagination of the child in his early educational career. This is the child's most dangerous power, because most intimate with heaven-ordained sympathies. It is the intellect's reporter of the feeling life. It is, indeed, the feeling faculty. It must be active. If not trained to organize the feeling life of the child into crude material for intellectual functions, then, unfortunately, but surely, it feeds upon the self-created chimeras of an undirected spirit, and dominates the whole life of the child, predisposing him to weakness and positive immorality. Laurie has well said: "The leading idea which shall give us at once guidance and a criterion of judgment in the elementary school is nutrition of feeling, inner and outer; that is to say, of the emotions within and the realities of sense without, and thru these training, with a minimum of discipline."

The second cardinal purpose of the elementary school is to *enrich the child*, and this will be best done in a system that provides as carefully for reflective activity as for expressive activity. Today we assume in our practices that a change of expressional activity is promotive of educational progress. That the child must be busy is true; but that he must be everlastingly at the busy table fingering things is not true.

Too much cannot be said for those contemplative and meditative moods into which childhood at some stage of advance is sure to enter. Shall we rudely break in upon the sacred communion, and drive the child to expressional features of school work? Shall we drag the pious devotee, who on his knees before the crucifix is communing with the invisible, from his vision splendid? Let us learn that the soul of childhood caught in the meshes of a great emotion is struggling and strengthening; that it shall finally break from its reverie, joyous, vigorous, free; that the soul in meditation is indeed enchrysalized and shall in due season arise iris-tinted, enfranchised, and glorified.

The nearest approach to this is our attempt to enrich the curriculum. Our best way to enrich the curriculum may be the best way to impoverish the child. The child is taught too many subjects in the elementary school, and the immediate need is not enrichment by correlation but by simplification. Are we not ripe for a gospel of extermination, to the end that enrichment of the child rather than the text may speedily come to pass?

The greatest gift the child receives in the elementary school is the gift of language — the power to talk, to write, and to read simple English understandingly, and to spell common words accurately. We speak eloquently of patriotism, but often forget that we make patriots only as we make lovers of our fatherland and lovers of our mother tongue. Since so large a percentage of our citizens obtain all their scholastic training in the elementary schools, it is essential that these schools give to the American child insight into the American life by means of the mother tongue. In the first years in school absolutely nothing should crowd into the curriculum to interfere with this language mastery. The only co-ordinate study — and that only as an occasioner of language — that needs serious recognition is such an acquaintance with objective things, thru *nature study*, as will engender in the child a sincere love for the things of nature. If we change our course of study from an intellectual to an æsthetic basis, the child will love what he now crudely knows, and this love of his early career will by transformation become the organized scientific knowledge of his advanced years. The basis must be sympathetic, not scientific. This warmth of interest will make pleasant, make easy, make speedy the advance of the child thru the whole range of his effort.

"It is," says Bishop Spaulding, "better not to teach than to weary." "Sowers, reapers, and gardeners, hunters, fishermen, and the feeders of flocks, are the best society for boys." And the enthusiastic observation of golden grain, springing grass, bursting bloom, flowing streams, happy flocks, and changing sky, are the best sources of inspiration for the whole educational process. The memory of these in years of maturity is attended by a warmth of interest that makes the hand more cunning, the brain more vigorous, the soul more noble.

This free activity and perfect play of emotional energy is suddenly suppressed when the child enters school. He is restrained where formerly he was free, and urged to activity to which before he was a stranger. School becomes distasteful to him. He needs in this first restraint the greatest care, the warmest sympathy. Keep his heart warm for the things he loved of his own choice, and link the new lovingly with the old. He should grow in feeling as he grows in knowledge. Indeed, the very source of his inspiration is to be found in the fact that he feels that he knows, and not that he knows that he grows.

A few years ago I saw a German schoolmaster, staff in hand, leading a score or more of boys along a winding stream, under towering trees, in the heart of the Thüringer hills. And what a scene! Teacher calm, communicative, contented; pupils leaping with the waterfall, singing with the birds, shouting with the breezes, running with the shadows, happy because in a school that fed the emotions and exalted the spirit.

All this rich contact of knowledge should be incorporated into chaste language. Accompanying this process of spiritual transformation of things into symbols is the duty of creating in the child a desire to share in the larger life of the race thru language. The child that comes to feel that the language symbol is the barrier between him and rich treasures of warm human experience will early find a breach in the wall and enter. No set method will be required. He will learn to read, and he will read in spite of the method; and, after all, the only permanently valuable method of learning to read is the method that will compel the child to read — that reveals thought and quickens the appetite for it. In this way learning to read is not a task, but a necessity. One compasses the processes for the same reason that he climbs a mountain — to get the broader view the new point of vantage affords. The child that reads is intellectually emancipated. The question of citizenship in the republic of letters is settled; the location and character of his activity are solely matters of detail.

This will not wholly satisfy our modern attempts to put into the elementary schools the beginnings of all studies. Why should every human interest find representation in the elementary school? Is the child to act forever only upon the data of his school life? If we taught less, would we not teach better? An overwrought curriculum produces stupidity. The elementary school does its best work when it creates *the desire to learn*, and not when it satisfies the learner. The best school is the one that sends the child into life eager to know and equipped to learn. We are too much concerned with immediate results. We lack the teleologic spirit, and count as lost all that which fails to flower and fruit in a day. The best products of a good school are ripened and garnered in the larger life which we denominate "after school." Our need, then, is a training that will make books, the reading habit, the permanent concern of the adult life.

The smartest child is not always the noblest citizen, nor will this land be stable and free, stable in its freedom, until the elementary school, the school of the masses, sends forth a product that will love books and spend the evening at home, in the family circle, in the intimate enjoyment of good reading, and not at the barroom, the country store, or the club.

Shall we longer retain in our practice the unclean spirit, long since cast out of our theory, that education is measured by the number of facts imparted; that progress in education is only and wholly a quantitatively measured thing; that quality is of no moment? Shall this be required of the schools, while we teach in our pedagogical institutions that culture, in any stage of advance, is worth more than knowledge, and shall the hypocrites flourish?

If the mental reaction, the creation of nerve tracts, the blazing of the trees along the new route until the incoming idea can run and not grow weary in its rush along a habit-hedged way to its own apperceiving mass, is essential to educational advance; if, like the prodigal, the new idea is to return each time to its own apperceiving progenitor and help swell the fatted feast — there must be time for repetition and for elaboration, that the new idea may be "at home," and that the old dwellers of the same sacred ceil may see enough of it to bid it welcome, to use it, and to be of use to it.

For the mastery of the number symbol, and elementary lessons in hygiene, history, geography, and related studies, no plea is necessary, since these are today overtaught, and in no organization of elementary education are they likely to be undervalued.

Are we not fundamentally foolish when multiplication of facts is accepted as enrichment of mind? Have we not listened to false gods, to the mercenary spirits that measure all things quantitatively, instead of practicing what we know to be everlastingly true — that the sum of knowledge gained does not render the mind versatile? And yet versatility is the best characteristic of a mind equipped for active life.

There is yet one other consideration to be borne in mind. The elementary school ought to foster the elements of true virtue by giving the child an insight into the elements of the higher life.

Politeness, conscientiousness, and humility (which trinity of powers Rosenkranz declares to be the basis of the religious life), these factors should be constantly and carefully fostered, even to the exclusion of much from the curriculum. For these the child is naturally eager. His properly trained feeling life will intensify this natural desire and make, provided time and sense condition their acquisition, his days in school his *happy days*, back to which in years of worry and toil and trial he will turn with a warmth of feeling and a depth of meaning that will render his school days a glad memory and a perennial source of comfort and strength. It will do away with a thousand testimonies to the justice of the lament of St. Augustine: "O God, my God, what misery did I then experience when sent to school! when I was told that it was as a boy my right course of life to obey my teachers in order that I might get on in this world and excel in those arts which lead to human honors and false riches. Then I was put to school to learn things of which I, poor boy, did not know the use; and yet, if I was slow in learning (because of this lack of knowledge), I was flogged, for this course was held in high repute by my elders, many of whom before me had trodden the same road and had marked out a wearisome path along which I was forced to go; thus multiplying the toil and pain of the sons of Adam. . . . . As a boy I began to pray to Thee; and I used to ask Thee, with no little earnestness, that I might not be whipped at school. I had a great dread of these sufferings and prayed earnestly that I might escape them; and yet I incurred them by not writing, reading, or minding my lessons so much as I was bidden. For memory and ability were not wanting to me, O Lord, but I delighted in play, and was corrected for this by those who did the same."

The elementary school fulfills its mission, then, by training the feelings; by such a simplification of the curriculum as will give the culture side of education greater prominence; by emphasizing the mastery of language as the central possession of the child; by an intellectual versatility, the best mental equipment for life; by promoting the virtues of politeness, conscientiousness, and humility; by giving greater prominence to the permanent rather than the transient results in teaching; and by placing in the elementary schools teachers so thoroly trained and enthused with the ideals of the school as to render the school career of the child marvelously successful by making it supremely pleasant.

WHAT CAN CHILD-STUDY CONTRIBUTE TO THE SCIENCE OF EDUCATION?

BY PROFESSOR J. P. GORDY, COLUMBUS, O.

A preliminary question must be answered: Is a science of education possible? We all remember Professor Dilthey's answer to this question, as expounded by Professor Royce in the *Educational Review*. Professor Dilthey says there neither is nor can be a science of education, and for two reasons: (1) the end of education cannot be defined in such a way as to be true of all peoples and for all times, unless the definition is stated in such general terms as to leave the question it attempts to deal with, to a large extent, open; (2) because the material upon which the teacher works — human nature — cannot be adequately defined in general terms, because each individual, by virtue of being an individual, is more than the type with which alone science is capable of dealing. In brief, we can have no science of education because we can never know in detail either what human nature is or what it ought to be.

It may seem at first sight as tho this kind of reasoning would lead to the conclusion that there neither is nor can be a science of anything. Says Professor Dilthey: "We have no science of education because wide differences as to the end of education have appeared among different nations, and in the same nation at different times; because we do not agree among ourselves except in the most general way, and because what we now regard as the end of education may not be so regarded a hundred years from now." May we not say with equal truth that no science of biology is possible, because what we now regard as its fundamental law — what is at any time regarded as its fundamental law — may not be so regarded a hundred years later? Such a reply to Professor Dilthey's first argument seems to me unanswerable. All of our sciences, in so far as they deal with concrete fact, consist, not of absolutely proved laws, but of what may be described in the last analysis as good working hypotheses, because they explain all the facts now known in that field to the human race. The possibility always remains that the accepted law of today may prove to be the exploded hypothesis of tomorrow. To say, then, that there neither is nor can be a science of education because we do not agree among ourselves as to what the end of education is, and because, in so far as we do agree, we may find ourselves in disagreement with the next generation, implies such a conception of science as would lead to the conclusion that we have no science of anything except in the department of pure mathematics.

But Professor Dilthey's second argument rests on different grounds. "If there is a science of education," says Professor Dilthey (and here Professor Royce agrees with him), "it would consist, in part, of such a complete and systematic knowledge of human nature as would furnish a complete set of rules for the guidance of education in a given case. In so far as a teacher has to deal with particular cases — not by means of his general knowledge of human nature, but by means of his insight into these particular cases — in so far he must be guided by knowledge which is not scientific in its nature. In so far as the teacher must for all time be guided by his insight into particular cases, in so far he must for all time be guided by unscientific knowledge." If it is true that the teacher's general or scientific knowledge of human nature is, and can only be, useful in so far as it sharpens his insight into particular cases, then it is true that we neither have nor can have a science of education. Whoever admits that the teacher is, and forever must be, guided by his insight into particular cases agrees with Professors Dilthey and Royce. Says Professor Royce: "Rules would here be suggested by the science at every point; yet they would never be rules that the educator could immediately apply, except with constant reference to conditions of his own nation, age, and child. Universal these rules would be, yet never universal in the sense that they might be taken as precise guides in the particular case. Aids they would be, but never substitutes for personal insight. In short, our knowledge of laws would be a good staff and a bad crutch."

Instead, then, of talking about the science of education, we ought, strictly speaking, to talk about the scientific elements in education — those laws, in other words, which throw light on the business of education. But if, out of regard to usage, we continue to use the term "science of education," we need constantly to bear in mind the limited sense in which such a science is possible. When, therefore, we ask the question, What can child-study contribute to the science of education? our question amounts to this: What more or less general truths can child-study discover which will help us in the business of education?

Still another preliminary question must be answered: What do we mean by child-study? Professor Barnes seems to me to have answered this question in a helpful way. He describes it as the inductive and quantitative study of human beings. Child-study includes, therefore, what is meant by genetic psychology. Genetic psychology aims to discover the laws that govern the growth and development of human beings. The interests, tastes, instincts, ideals that predominate at different periods in human development, the various capacities that exist at these different periods, and the extent of those capacities, are questions for genetic psychology to answer.

But child-study, as Professor Barnes has defined it, seems at first sight to include more than this. We might say that all study of the adult consciousness by means of the inferential method, all study of the adult consciousness the object of which is to discover peculiarities of individuals which the student could not discover by a study of himself, simply because they are peculiarities, is a part of what has been improperly called child-study. President Eliot, for example, holds that the best way to develop respect for expert knowledge is to make a man an expert along some particular line. Is he right? There is but one way of ascertaining, and that is by an actual study of experts, so as to learn to what extent experts along one line have respect for the conclusions of other experts. So, likewise, Mr. Galton got the notion that the power of people to form vivid, exact, and detailed images of things varies greatly, and he proved that he was right by a study of individuals.

But such study really forms a part of what is called genetic psychology. Why do people differ in the respect which they have for the conclusions of experts? Why do people differ in their power to form vivid, exact, and detailed images of things? So far as such questions can be answered at all, they must be answered by a study of the laws that govern the growth and development of human beings in connection with the history and peculiar experiences of those particular human beings whose characteristics we are investigating; we must say, for example, that this man has the power to form vivid, detailed, and exact images of things, either because of his experiences and his education, or because of inherited capacities; that that man's attitude toward expert conclusions is the result of one or other of the same two causes. But to determine to which of these causes it is due we must have resort to genetic psychology. The question, then, which I am to try to answer is this: To what extent can a knowledge of the laws that govern the growth and development of human beings throw light on the business of education?

We shall find this an easy question to answer, if we bear in mind that the business of education requires as precise a knowledge as possible of the answers to six questions: (1) What is the end of education? (2) What instrumentalities ought society to employ for the realization of that end? (3) What subjects should students be required to study? (4) In what order should these studies be taken up? (5) By what methods should these subjects be taught? (6) What amounts of time and energy can students be required to give to work without injury to their health? He who can answer these questions most perfectly; who has the most precise and detailed knowledge of the end of education; whose judgment is wisest as to the instrumentalities which society should make use of to realize that end; whose knowledge of the subjects which ought to be taught, the order in which they should be taken up, the methods by which they should be taught, and the amount of time and energy which students are capable of giving to their work without injury to their health — has the largest amount of the knowledge that throws light on the business of education.

I am sure of your assent to this proposition, except in so far as it relates to the agencies which society should make use of in realizing the end of education. But are not questions as to the best mode of selecting state school superintendents, the qualifications to be required of them, the duties to be assigned to them, questions which throw light on the business of education? Has not the business of education a vital interest in the qualifications, duties, and methods of electing boards of education? If we select state school superintendents and boards of education in any way but the best way; if we assign to them any duties except those which they ought to perform; if we require of them any qualifications, more or less, except those which they ought to possess, will not the business of education suffer? Will not the business of education suffer, if society makes a mistake as to the amount of money that ought to be raised for school purposes, or if it undertakes to raise that money in the wrong way? Without doubt, then, a knowledge of the agencies which society should employ, of the mechanism of which it should make use, is a part of the knowledge which throws light on the business of education.

We may, then, consider our question under the following heads: (1) Will genetic psychology throw any light on the end of education? (2) Will it help us to see what agencies society should employ in the business of education? (3) Will it tell us what subjects ought to be studied? (4) Will it tell us in what order they should be studied? (5) Will it tell us by what methods they should be taught? (6) Will it help us to see how much work students can safely be required to do?

1. It seems to me self-evident that genetic psychology cannot tell us what the end of education is. The end of education will be determined for each individual by his conception of man. Start from Plato's conception of man, and you will reach Plato's conclusion: that the end of education is to develop the power to see those divine ideas in the contemplation of which alone true wisdom consists; that those that do not possess the capacity to develop this power are incapable of being educated. Agree with Aristotle that the supremely important thing in man is the intellect, and the supremely important thing in life is the activity of the intellect—and you will agree with him that the end of education is the development of the intellect; that those who have little intellect to develop have no business in life except to serve those who have. Say with certain religious teachers that the supremely important thing in man is his capacity to believe certain doctrines—and you will agree with them that the supremely important thing in education is the development of this capacity. Say with Dr. Dewey that a man ought to have no life of his own, that he lives in and for and by society—and you will agree with him that the education of man should be determined entirely with reference to the needs of society. Agree with the Herbartians that the will is not free, and yet insist with them that the conduct of this human automaton is a matter of the first importance—and you will agree with them that the development of interests—such interests as will inevitably impel the individual to a certain kind of conduct—is the supremely important thing in education. What you think of man, what you think of human life, will determine what you think of the end of education. But the science that undertakes to tell us what man is, what his inmost nature is, is philosophy, with which genetic psychology has nothing to do.

2. Will genetic psychology throw any light on the agencies that society should employ for the realization of the ends of education? This question, also, I should answer with an unqualified negative. Such answers as this question is capable of receiving, the so-called science of education will borrow from a study of comparative politics. What methods have actually worked well in this direction? Were there any special conditions in the cases where they worked well to prevent them from working well elsewhere? It is the answers to such questions as these which will tell us all we shall ever know about the agencies which society should employ in the business of education.

3. Will genetic psychology help us to decide what subjects ought to be studied? The true answer to this question can be most clearly seen by considering the principles upon which a choice ought to be made between different courses of study. What you think the end of education is will determine, to a great extent, your opinion as to the subjects that ought to be studied. Suppose you say that the end of education is preparation for rational living; and suppose you say, with Davidson, that such preparation consists of four elements: (1) knowledge—that knowledge of the laws of nature and of life which will enable us to act wisely in the various emergencies of life; (2) discipline—that training of our minds which will enable us to draw the proper inferences from what we know; (3) that cultivation of the emotions which will cause us to estimate things at their proper worth—such a training as will make us prefer to do what is wise; (4) that training of the will which will enable us to do what we think we ought to do—will not your deci-

sion as to the subjects that ought to be studied be determined primarily by your idea of these elements? You wish to give your pupils that knowledge which will prepare them for rational living. And what is that knowledge? Herbert Spencer has told us as well as anyone else, and he did not base his conclusions on genetic psychology.

What kind of discipline do we need in order to be able to live wisely? Professor Hinsdale has answered this question for us. He has told us that we cannot acquire the power, for example, to reason correctly about our children by studying politics, or learn how to vote wisely by studying Latin and Greek; that we acquire the power to reason about any thing by reasoning about the class of things to which it belongs. But Professor Hinsdale did not base his conclusions on genetic psychology.

What kind of training do we need in order that we may be able to estimate things at their proper worth, to hate what we ought to hate and love what we ought to love? Plato answered this question with almost ideal completeness. Bring children from their earliest years, he said in substance, in contact with the highest concrete ideals they are capable of appreciating. Teach them to love nobleness, and bravery, and generosity, by teaching them to love noble, brave, and generous men. But Plato did not base his conclusions on genetic psychology.

What can we do to train the wills of our pupils, to give them the power to do what they have decided is wise? I think Professor James has gone as far as anyone else toward answering this question. We must realize, he says in substance, the immense difference between fine feelings and fine actions. We must constantly remember that generous feelings which do not stimulate their possessor to generous actions under appropriate circumstances leave their possessor less generous than they found him, that unselfish aspirations which do not issue in unselfish conduct tend to weaken the will. But Professor James did not base his conclusions on genetic psychology.

4. What light can genetic psychology throw on the question as to the proper methods of teaching? I am not a Herbartian. I dissent radically from the Herbartian doctrine of the will, and consequently from the Herbartian doctrine of interest. I believe that the Herbartian doctrine: that all the studies in the school course may be made a means of revealing moral ideas, and consequently a means of moral training, is not only false, but pernicious. I believe the doctrine of concentration, as many Herbartians explain it, is at war with the fundamental principles of psychology. But, nevertheless, I believe that the main outlines of the Herbartian doctrine as to the steps or stages in the methods of teaching will stand the test of time. But Herbart did not base his conclusions as to method on genetic psychology.

5. Will genetic psychology throw any light on the proper order in which studies should be taken up? Undoubtedly. Altho the end of education must determine *what* is to be taught, the question as to *when* the various subjects we undertake to teach must be taken up manifestly cannot be answered except by a study of children's capacities. Granted that there are things which a child must know in order to be educated: it is yet evident that the child cannot learn them until he has the capacity to learn them; and there is no *a priori* way of determining when this capacity will appear. Granted that there is a certain training of his powers which a child must acquire in order to be educated: it is evident that there is no *a priori* way of determining when his faculties can begin to be exercised, and how much, in order that this discipline may be the result. Granted that the child must acquire a certain training of his emotions, that he must come to love what is good, and hate what is bad, in order to be educated; and granted, also, that his training can only result from bringing his mind into contact with the noblest concrete ideals he is capable of appreciating: it is evident that there is no *a priori* way of telling what are the noblest ideals he is capable of appreciating. Undoubtedly, the two great questions for genetic psychology to answer are: (1) When shall we teach children the subjects they ought sometime to study? and (2) How much time and energy can we safely ask children to give to this work? This first conclusion is so nearly self-evident that it seems

unnecessary to illustrate it. But a little consideration will convince us that, as a matter of fact, we are guided, and always have been, in our decisions as to when the subjects in our courses of study shall be taken up by a sort of empirical genetic psychology. One superintendent would have technical grammar taken up in the fifth year, another in the sixth, another in the seventh; another would have it put off till the high school; and these differences result from their different estimates of the time when the capacity to deal with these subjects appears.

We find illustrations of the same truth when we recall the few valuable results of child-study. In what way have the studies in this country and Europe as to the contents of children's mind been helpful? By showing us what we can teach. What we successfully teach at any stage of a pupil's development must be brought into relation with what a pupil already knows, and studies which help us to appreciate what a pupil knows help us to decide what we ought to try to teach him. Take, again, the studies of Barnes and Wissen on children's interests. The former has shown that young children are interested more in what objects can do, in what they are good for, than in what they are. What does this show? That it is these phases of objects to which we should call the attention of children in the early stages of their development. Wissen has shown that children very soon forget the abstract moral essays which they read—essays in bravery, generosity, and the like—while they vividly remember stories embodying the same moral ideas, and like them because they embody those ideas. The same kind of lesson emerges: We must skip the moral essays, and teach the stories. From every point of view it is evident, then, that genetic psychology can render the so-called science of education very great service in this field. If we have depended hitherto on a purely empirical knowledge of children for guidance in this direction, it must be evident that the more scientific we make our knowledge, the more intelligently we shall be able to determine when our pupils should take up the various subjects of study.

As to the service which genetic psychology can render in helping us to decide how great are the demands which we can safely make of children, illustration is surely unnecessary. All of us understand that the numerous studies of fatigue which have been undertaken in this country and Europe throw light on this important question, and that it is from such studies that we must get all the light upon it that we ever receive.

Summarizing: (1) The question, What is the end of education? must be answered by philosophy; (2) the question, What agencies should society employ to realize the ends of education? must be answered by a study of comparative politics; (3) the question, What subjects should be studied in order that the student may be educated? must be answered by general psychology; (4) the question, What methods shall be used in teaching these subjects in order that they may be made to yield their educational fruit? must also be answered by general psychology; (5) and (6) the questions as to how much the student can safely be required to do, and in what order he shall take up particular subjects, and how long he shall pursue them, must be answered by genetic psychology.

If these conclusions are sound, they ought to be of value to two classes of students. One class of students have become so disgusted by the vast amount of childish study which has been perpetrated on an unoffending public under the name of child-study, by the serious and pompous announcement of new conclusions concerning children which have been known for thousands of years, and by the equally serious and pompous announcement of conclusions concerning children utterly destitute of significance for the science of education, that they are tempted to say that the entire movement in the direction of child-study has no scientific basis, and can lead to no scientific results. If the conclusions reached in this paper are sound, it is clear that there is a field, and a very important one, for child-study; that questions which have a vital bearing on the business of education can be answered by genetic psychology alone.

But there is another class of students to whom our conclusions, if they are true, should be no less suggestive. This class of students have been so carried away by their enthusiasm for child-study that they feel strongly inclined to elbow out of the educational field everyone who does not believe with them that child-study is the beginning and end of all scientific work in education. Are you engaged in the study of children? these students are inclined to ask. Are you getting up questionnaires for children to answer? If so, you are an original worker in the field of education. But if you are not, you are a quack and a pretender, and the sooner you get out of the educational field, the better. If the conclusions reached in this paper are true, the attitude of this class of students is also to be condemned. For great questions which have a vital bearing on the business of education cannot be answered by child-study.

Our conclusions ought to be of value to this class of students from another point of view. Not everyone that says, Child-study! Child-study! shall enter into the kingdom of educational truth. Pile insignificant fact upon insignificant fact, and you bring not a single stone to the foundation of the science of education. Do you want a criterion to distinguish between facts having a scientific value and facts utterly worthless from the point of view of science? Such a criterion is easily stated. If your facts help to answer questions about children which could not be answered before, publish them by all means; they have a scientific value. But if your facts only tell an already twice or thrice told tale, in the name, and in behalf, of the overworked American teachers, I beg you, keep them to yourselves.

SOME CONTRIBUTIONS OF CHILD-STUDY TO THE SCIENCE OF EDUCATION

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Sympathetic observation of children—in other words, rational child-study—has helped the science of education in certain important ways. Child-study has contributed little that is absolutely new, but it has emphasized certain truths which were only dimly known before, and it has emphasized them in such a way as to make them operative. There are two ways of knowing educational, as well as other, truths. We may know a truth in a hazy manner, without acting on our knowledge. We hear people assenting to truths every day, without acting on them. Lowell has rightly said: "It is not the finding of a thing, but the making something of it after it is found, that is of consequence." A new definition of knowledge must be framed for the coming century. That must not be called knowledge which has no outcome in action. Child-study has presented some old truths so definitely as to cause action in their direction. A perfect idea always has the motor element strongly developed.

Child-study has quickened the blood in the old science of education by some welcome directions for developing what is potentially in the child. Rational observation of children has shown some of their leading potential capacities, which have not had sufficient nurture under the older education. If we have thru a study of children a clearer idea of their potential capacities, we can certainly educate the child more scientifically.

First and foremost, child-study has shown that the strongest potential capacity is the capacity for action. If teachers reply that it needed no prophetic child student to tell us this, the query must come sharp and quick: "Has your teaching been such as to develop or to throttle this capacity for action? Have you trained children to become men of action in a world of ceaseless struggle, or have you endeavored to paralyze their love of action by feeding them almost exclusively on what Shakespeare has termed 'the alms-basket of words'? There could have been no effective knowledge of these activities, unless they were ministered unto. The majority of teachers have today slight conception of this truth. If you know and love your vocation, feed the activities of your lambs."

Rational observation of children has pointed out the fact that this capacity for action takes chiefly the direction of imitation. One book of 300 pages, on child observation, is given up to *Imitation and Allied Activities*. Before the end of the first year the child has begun to imitate the world around him. He is, consciously or unconsciously, trying by his own activities to create a copy of that world. Everyone who comes within range of that child's senses is his keeper.

Imitative actions leave in the motor-nerve cells an impress or a neural tendency to reproduce the movements unconsciously. A child of twelve months recently imitated the opening and the closing of his father's hand. While the child was sleeping the following night, his hands opened and shut like his father's. Since the child was unconscious, these movements were the result of a new material disposition in motor-nerve cells, which discharged automatically in the direction of former activities. In other words, actions effect a change in motor-nerve cells, and that change is the physical basis of motor memory. Sleeping children have been noticed moving their limbs, puckering their lips, and scowling, in imitation of parent or nurse. A permanent modification in the nerve cell is usually the result of imitated actions, which will henceforth tend to become unconsciously persistent. This truth must be of worth in the science of education. These truths ought to make us realize in a new light what is meant by tying a child helplessly to his own past. If we have given the child his fitting birthright, we have during his imitative period ingrained in his very nerve cells a tendency to habitual actions of the right kind. Only such a child is ever enfranchised. He has the lower order of things a matter of neural certainty.

In some respects this age has deteriorated in teaching, and some of this deterioration is due to those who are ceaselessly crying, "Parrot teaching." It is high time for someone to champion the parrot's place in nature, unless it can be shown that the Almighty or nature made a mistake in evolving the parrot and the imitative activities of children. Parrot teaching has its place, just as much as teaching of a different order, and neither kind can take the place of the other. Since physiological psychology has shown us that repeated activities of the same kind are necessary in both motor and sensory cells to effect that stable material disposition which is the physical basis of memory, repetition has held a higher place in memory culture. It is a great comfort to have a brain cell retain something which we did not understand at the time, but which future years of thought make plain, if the memory has only retained the fact until the prime of thought. Many of the child's motor memories have become stable before he can philosophize about movement, or even before he knows the mechanism of the muscles or how movement is produced. Luckily his lack of knowledge does not keep him from forming many motor memories of the right kind, if he only has a good teacher to serve as a model. These memories will be just as serviceable in future time as if he understood them at the time of their acquisition.[1]

Child-study has shown that the young child's most pronounced tendency is toward imitative action; in other words, toward parrot action. In the face of these facts many teachers are gravely telling us that we must not countenance nature in her mistakes. On what else can we base the earlier education of the child than on his capacity for imitation? If we give the child good models at the start, we need at first care little for the "how" or the "why."

How any child student at all versed in neural laws can decry a large amount of parrot teaching is simply inexplicable. When the child learns the pronunciation of his own or of a foreign language, the more parrot-like he follows a perfect model, the better the result. Language is largely arbitrary. A rose might as well have been called by some other name. Spelling is worse than arbitrary. Many results of the newer education have been of the uncertain, scattering type. There has been but little absolute neural certainty about the child's acquisitions. In these later years I have witnessed the sowing of the seed for a crop of miserable spellers, and I have lived to see the crop reaped. Good spelling had in the majority of cases required much parrot repetition, and, of course, that would not do. A man brought up under the old method was told that he had in an article misspelled the word "embarrass." "Have I?" he asked of his younger informant. "Confound old So and So! He told me he had grounded me so in spelling that I could never forget, that all I should have to do would be to write ahead without thinking of the spelling."

"Well, you have misspelled 'embarrass;' you have put two *r*'s in it," replied the younger man.

"To tell the truth, I do not know whether the word has one *r* or two *r*'s, but I supposed my fingers could attend to that while I was thinking what to write. Let us look up the word."

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[1] HALLECK, *Psychology and Psychic Culture*, pp. 133, 143-5, 238.

A dictionary was procured and the word found, when the elder exclaimed: "Aha! old Parrot So and So was right. Well, I'll continue to let my fingers take care of the spelling, while my brain attends to the thought."

That old schoolmaster may not have known the technical name for motor memory, but he did know better than to attempt to put frills and furbelows on the garment of a child, while the garment itself was a thing of shreds and tatters, which barely hung together.

The only reason that I can see for decrying the development of the child's imitative powers is because some teachers may think that this training, which merely lays the foundation, is the be all and the end all of teaching. A dwelling house is something more than the foundation, and education must build lofty stories of thought on these foundations of imitation, or they will be laid in vain.

Rational child observation, coupled with the study of physiological psychology, has emphasized the fact that, since activity is one of the special characteristics of the child, he should have far more motor training than is accorded him today. Nature, speaking thru the child, says, "Act!" The pedagog growls, "Keep still there!" Perhaps the majority of the education of today is comparatively of the quiescent type. Motor education for the masses is in this country far behind what it was fifty years ago. Only the favored few, the very few, have a small fraction of the motor training which active life demands. Sensory education has made vast strides of late, and altho this naturally leads to motor development, the motor factor is still systematically repressed.

We have in actual schools two forces directly intended to counteract motor atrophy, the work in the kindergarten and in the manual training school. The kindergarten keeps the child only a few years, but it does some excellent motor work with him. After leaving the kindergarten, in the majority of cases, he gets no more training of this kind, except what he picks up in his plays and games. The manual-training school has recently been established to supply this deficiency. The object is altogether a worthy one. Has it succeeded, or does the manual-training school, like institutions of a different type, need changing in certain points? It must be understood that our attitude toward a school with such an object cannot possibly be antagonistic. Our attitude can be only that of a kindly, correcting parent.

We have in this country a number of great technical institutions, which pre-eminently fit young men for action, whether in building bridges and railroads, in working mines, or in turning out and putting in position complex electrical machinery. A president of one of these great technical schools said to me not long since that, after having tried students prepared at a number of different manual-training schools, he much preferred the graduates of the English or classical high schools.

Such a statement from a man whose duty it is to prepare men for action demands attention. I do not know his personal reasons for this position, but I do know that we cannot decry the right kind of motor training, unless we are prepared to hold that the child's strongest potential capacities exist on purpose to be repressed. Perhaps some light may be thrown on that president's view, when we come to study the magnificent motor training which the majority of our great men of fifty years ago received in the greatest institution for motor training ever conceived.

While up to a certain age nothing can take the place of the education of the imitative capacity, or parrot training, as some prefer to call it, yet such training, beyond a certain point, is certain to dwarf the individual. The child early in life repeats myriad of his motor experiences. What he needs as he grows older is to be taught how to combine these movements into new forms. Just as the same old metals, iron and steel, may be combined into forms as dissimilar as a sewing machine and a fork, just so should the child's recurrent movements be combined in the most dissimilar ways.

Fifty years ago there was not the present crowding into cities. Men like George Washington, Daniel Webster, and Abraham Lincoln had the magnificent motor training of the farm. Our schools have not yet equaled the method of the farm. If there is one kind of training where parrot methods must not be employed after the beginning of adolescence, that kind is motor training. If the boy, during that age, is tied down to drawings, patterns, and models made for him by another, the active side of his creative life will be nipped in the bud. There is nothing else so dwarfing as this type of motor education. The reason for this will be evident, if we consider what are the results in a growing brain of movements that are not recombined in varying ways. Of course, movements in hands, arms, and legs must be repeated to the end of life, like the letters of the alphabet. The only point to be insisted on is that, to have value, they must be combined in new forms.

An oft-repeated movement makes, in the central nervous system, a path easily traversed.[1] This is only one result. An equally important one needs to be kept before us. Such a movement means not only a facile cerebral path in a given direction, but also a blocking of other paths in different directions. There is positive neural resistance, increasing with advancing age, to the formation of new brain paths. Here is a reason why few persons get absolutely new ideas into their heads after thirty. An idea scarcely deserves to be called the shadow of an idea, unless it goes out in action, and there is strong neural resistance, after that age, to the combination of movements into new forms. It is hard work to teach an old dog new tricks.

In short, well-worn brain paths keep the current of action from finding new outlets. In other words, habitual actions are powerful inhibitors of movements which do not tend in the same direction as the old. Hence, youthful habits of the right kind should not be narrowed to one field. They should be like good roads which open up a fertile country in every direction. Too much specialization in early youth can only have bad cerebral results. A man may wish to use, in later life, chiefly the muscles of his arms, but he had better not neglect the early development of his entire body.

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[1] HALLECK, *Education of the Central Nervous System*, pp. 100, 101.

One of the inspectors of English workhouse schools, a type of school that demands constant motor training, says: "The most prominent faults of workhouse boys, being rather of a negative than of a positive character, as indolence, vacancy, stupidity, are such as would be most likely cured by greater freedom of life." The intense specialization of the present age is very dwarfing. Boys go into a factory early and spend their entire lives in making one part of one thing. They cannot help being narrow, stunted creatures. It has been found that certain factory hands do not improve in their output after thirty. At forty-five their productive power has shown a decline of 20 per cent. If we could have before us an assemblage of men of Shakespeare's day, we should be struck with the absence of over-specialized factory hands, those human automatons of modern times.

How does the motor training of the farm differ from that of the school? The various combinations of movement demanded by farm life are almost innumerable. Let it be understood that such movements furnish the best possible opportunity for training the powers of thought. I do not believe that children can be taught to think naturally in any other way than by movement. The child who does not think as he moves will very soon meet with a painful accident, or be killed and removed to make room for someone who does think as he moves. If a child moves in many varied ways and survives, he cannot help thinking in many varied ways. If he moves in a few ways only, his alphabet of thinking will contain but few letters.

On the farm, varied motor combinations and thinking are in constant requisition. The boy is called on to repair a fence with insufficient materials, to mend a wagon shaft on which a horse has stepped, to fix the harness on the road, to repair a horse rake or a mowing machine, to mend a milk pail, build a hencoop, stop a leak around a chimney, build a wall out of irregular stone, keep the inclined doors of a cellar gangway in position without support, drill holes, rivet things together, patch the roof. It is a great advantage for the boy to have few tools, for he thereby learns how to make ingenious shifts and new combinations of movements. A rule-and-line carpenter would be in despair if he had to fix things under the disadvantages that confront the farmer's boy. The carpenter's training has often been so narrow that he must have everything just so, or he is helpless; for this reason the farmer will frequently not hire him. I once watched the maneuvers of two boys, the one reared on a farm, the other trained in the schools. There was a small table, with two cleats nailed on the under side. A small piece had been planed off the ends of the cleats so as to hold a yardstick just out of sight under the table. The ends of the cleats had swelled so that the space was too narrow for the purpose. The schoolboy got a rasp, but the space was not wide enough to admit it. He then tried his jack-knife, but the grain of the wood ran diagonally across the cleat, so that the knife was making matters worse. He seemed nonplused, but the farmer's boy, who had been quietly watching the operation, picked up a piece of oak board, which he whittled down, so that considerable pressure was required to shove it between the edge of the cleat and the table. He then took a handsaw and began to saw between the wedge and the cleat. Since the wedge was the harder, the saw cut away the cleat. After a few trials, the farmer's boy had the space exactly right for receiving the yardstick. He had combined the wedge, the cleat, and the saw in a new way. No demonstration of a stationary geometrical proposition could have trained his thinking powers half so well. No repetition of movements, planned for him by another, could have made him a self-reliant thinker. The thinking which does not avail when one is confronted by a new and untried emergency is of little worth.

I have often thought how Washington and Lincoln learned, in the constantly recurring emergencies of farm life, to face new problems and to solve them. I hope to live long enough into the next century to hear it cry shame on any instructor who tries to teach children to think by divorcing them from their most pronounced characteristic, movement. No thought without movement, will some day become the watchword of the teacher of children. It is the head, the thinking power, that guides these new combinations of movement. Close attention is requisite for thinking. The child finds little trouble in centering his attention on anything that moves. He is naturally more interested in his own movements, in those of other people, of animals, and of things, than in anything else. Unnatural attempts to think can only make a child's life wretched. Education today needs to turn its attention toward the motor-thought training of children, until they have reached a sufficient age so that they can more naturally attend to subjective ideas. Introspection should not be a marked feature of childish life, because its mind contains but little, and it should be busy in learning the objective world.

Fortunately, the majority of children have much valuable motor training in their games. The English have long prided themselves on this feature of their education. A recent English psychologist says: "What our national games have done for the English race it is difficult to overestimate. . . . . The playing fields are the finest schools of organized co-operation in the world."

I know of no better way to eliminate thoughtlessness, or the thoughtless person, than to set him to moving. Scratches, bruises, and falls are powerful cultivators of thought. Movement means pain or death to the thoughtless. What stronger incentive to think can be given to children than to make them move? Since their most pronounced characteristic is movement, it is time that teachers utilized it more widely in training children to think. Verily, in spite of child-study, the adult still loves to educate them in the most unnatural way. Let it not be forgotten that humanity, in its wonderful march from barbarism to civilization, was taught chiefly in the school of movement.

Observation of children has certainly contributed to the science of education something in regard to the teaching of morality. Such observation has shown that those who try to teach morality by mere word of mouth waste their efforts. Morality deals only with certain types of action. Where there is no action, there can be no morality. If the child cannot interpret moral lectures in terms of its own actions, the lectures might as well be given in a foreign tongue. The old type of Sunday-school book preached a good system of ethics, but it was without much result in moral action. If I might briefly define four-fifths of all the morality now taught in schools, I should say that this school morality consisted in the eternal negation of action. Being good consists chiefly in not being bad. By parity of reasoning we may define boiling water as water which is not cold. How many teachers show children how to be moral on the active side and lead the way?

If a part of those well-meaning teachers who show the industry of the magpie in making collections of heterogeneous facts about children would study the history of the race in its development from barbarism to civilization, the science of education would be the gainer. Before we can intelligently train the morals of children, we must understand how the conscience of primitive peoples was developed and educated. They were like children, thinking that wrong was right at one time. What class of experiences changed these views? We shall find that movement and its consequences have ever preached to savage and to child a more powerful ethical sermon than mere words. I hope at some future meeting of this body to have the luxury of listening to a paper entitled, "Factors in the Development of the Moral Sense of Primitive People and Their Application in the Ethical Training of the Child."

Many teachers have already learned that to heap together a mass of soulless statistics about children is not to study the child. However useful a reasonable number of observations may be, the one who rests content with them will always find a Rubicon between himself and the soul of the child. Statistics afford a vantage ground for studying children, but there is a great gulf fixed between the statistics of the subject and that loving knowledge of child nature which can be born of sympathy alone. Without this sympathetic atmosphere, the science of education will beat its wings helplessly in a vacuum.

DISCUSSION

Professor Charles O. Hoyt, director of Training School, Michigan State Normal School, Ypsilanti, Mich.—Two distinct studies, involving two quite different methods, will, each in its own way, lead to results that, appearing in opposition to each other, may eventually join in one ultimate end in education. By the study of children in aggregates, in masses, or in groups, much has been, and is being, contributed to psychology. The psychologist has reaped this great benefit, but for the common-school teacher as yet there has been but little participation in the valuable gains to this science. It may be inferred, however, that in time these and many other, and perhaps more valuable, discoveries will contribute materially to the science of education. Thru a study of the single child in his individuality, which is inherited, and in his personality, which is acquired, it is thought by some that the greatest immediate additions may be anticipated.

When the common-school teacher understands each individual child better, then there will be an adaptation of materially modified principles in the development of that nature, instead of an attempt being made to adapt the being to a few cast-iron metaphysical deductions — relics of the philosophic lore of a former age. If the whole educational machinery exists for the child, and he stands at the very center of such a system, and if he, thru the acquirement of new experiences by means of old ones, does for himself that which may contribute toward effecting a change in himself, his fellows, and his surroundings, in proportion as teacher or parent grows into an appreciation of his powers, then everything in educational theory must be tested by reference to the living child in the schoolroom by the ones in daily contact with him, and not by the scientist in his laboratory.

Admitting that much good has come to children as a result of our study of them, it is equally true that teachers as well have been greatly benefited and strengthened for this work, and thus have become strong agencies in effecting changes in the means employed in education.

Given a teacher equipped academically and professionally, imbue her with a spirit of investigation and a desire to observe children's ways, and she becomes a controlling factor — a power in any school system; she may disregard some educational principles which she may have learned, but never understood, but thru this close, personal touch with child life a spirit has manifested itself and tempers the atmosphere of the entire school. It reaches each child because she understands him. She may dare to disregard the logical arrangement of the manufactured course of study, but she teaches well nevertheless. It is altogether possible that in the selection and presentation of the subject-matter she displayed originality and departed from the philosophical, and even the accepted psychological, law, and yet supplied their needs as she found them, in spite of her nonconformity to fixed principles. She taught her boys and girls well withal. But we contend, to permit such freedom and originality would produce anarchy and wreck the system. Given thousands of such teachers working with the same spirit, being untrammeled and free, and a new system will come — a system that will bring with it new principles and new laws, formulated, in the one instance, by the expert from the standpoint of science, but tested and modified by the laborer from the standpoint of the child. We must not minimize the great work of our leaders in their studies of children in the aggregate, but all workers, from the kindergarten to the university, should lend all needed assistance in their study — extensive in its character. On the other hand, to the common-school teacher, who is with the children day by day, month by month, and year by year, there is need of encouragement in a line of study that is intensive in its character.

She cannot do this alone. There is need of help, direction, and inspiration; and while little that possesses large scientific value may be deduced from her investigations, it may be a means of preparation for the uniting of principles and methods later on. This will, in the end, result in a change, the exact character of which cannot, in the light of investigations already made, be determined.

Two forces appear that may serve as agencies in assisting and encouraging the grade teacher to study the child — the individual, the exceptional — as she sees him from day to day.

We find the teacher already in service and the teacher who is being trained for the work. With the first the supervisor in city, village, or district may do much to inaugurate such a line of study and observation. On the other hand, the work of training students in the practice schools of normals may carry with it that which will fit the teacher to do this.

Neither superintendent nor teacher can find time for the collection of data that possess not a single feature of immediate practical value; and if they could, the chances are that either would manifest but little interest in such investigations. But has it not been shown that it is possible to do a work of such a character that there is a study, first, of individual children in each room, and so on, until all were fairly well understood ? Their organisms and conditions and needs being somewhat thoroly mastered, few facts that would be of value to the specialist were recorded; no tabulation of results attempted; perhaps nothing new discovered; but, best of all, for teacher and pupil alike, a new spirit has been given the entire school. The first steps have been made in the preparation for the reception and assimilation of new principles, or new methods, as the outgrowth of new laws.

School and home will not be so widely separated in the future as they have been in the past. Thru a union of the interests of teacher and parent, by means of frequent conferences, still another force has been at work, a force by no means of inconsiderable importance.

A large part of the work in our normal schools is professional in its character. Some few of the students to be found there have had a limited teaching experience; but of all students but a very small number have any knowledge of systematic child life, and fewer are in sympathy with the same or appreciate the needs of the child, because they do not know them. Too often their psychology has been a mass of philosophical abstractions drawn from books rather than from the study of the living, active child. Educational principles, it is true, have been learned, method has been accepted, all has been reasoned out, theorized upon, or taken for granted. In the practice school they come in contact with a living organism, concerning which all that has gone before seems of little value in their estimation. The ideal comes in contact with the real, and may be utilized for a definite and distinctive purpose. It may not be found impossible, at this stage of the course, to incorporate in the work of the training school such an intelligent observation and study of children that in all of their future teaching these student teachers may carry into the schools a spirit of liberal investigation and fruitful observation of children that will supplement the work of the superintendent. Teachers will be led to succeed where otherwise they might have failed. The schools will be made better, and certainly the children benefited.

In this way, and along these lines, one may justly inquire : Is it not possible for child-study to contribute to the science of education, and, by so doing, assist in the solution of some of the great questions that are perplexing educators everywhere ?

THE LIGHTING AND SEATING OF SCHOOLROOMS

BY DR. W. A. MOWRY, HYDE PARK, MASS.

Local school superintendents have great responsibilities upon their shoulders. Perhaps they are oftener guilty of sins of omission than of commission. Possibly no officers in the world, outside of military lines, ought to be more independent or freer to carry out the ideas which their own experience, study, and judgment dictate than they. Yet, is it not true that they are very generally "cribbed, cabined," and controlled by officials who have little knowledge of what ought to be done, and yet have full power to do, or not to do, as they please? In many cases even public opinion has but little influence, while full authority is centered in certain men who are privileged to exercise it for a brief space, and who are quite apt to make the most of their opportunities.

Few subjects connected with the management of the schools are of greater importance than the hygiene of the schoolroom. The scope of this paper is limited to the two topics of lighting and seating. I desire to call your attention briefly to the matter of lighting schoolrooms, and beg to be permitted to speak a little more at length upon the other topic — that of desks and chairs suitable for the carrying on of school work to the best advantage.

LIGHTING

Very little attention has generally been given in this country to the proper lighting of schoolrooms. Too often the children sit directly in the glâring sunlight, sometimes facing it, as it pours thru the windows, destitute of shutters, blinds, or curtains. Still oftener the teacher must sit at his desk, facing windows located behind the pupils. The windows of a schoolhouse are generally placed here and there by the architect or the carpenter, according to his notion of what will look well from the outside. It is to be feared that in many communities very little attention is given to the proper amount of light which is required for the schoolroom, or how it should be arranged to the best advantage.

Cultivated society has its drawbacks. Certain evils are incident to the conditions of modern civilization. Germany found long ago that the eyesight of the children was suffering from the conditions incident to schoolroom study. That country was compelled to take measures to bring about a more intelligent attention to the lighting of her schoolhouses. The conditions in America are more favorable than in Germany. We have less dull, dark, and cloudy weather, and hence a greater quantity of light. The eyesight of our children ought to be good, and will be if proper attention is given to this subject. It is, however, the general complaint that long-continued study in school or college injures the eyesight. This need not be and ought not to be; moreover, it will not be if superintendents and others directly concerned will do their duty.

I have in mind a private school for boys between the ages of ten and twenty years. A new schoolhouse was built, with due regard to the proper conditions of lighting. There were in the school from 200 to 250 boys. An eminent oculist made a record of the condition of the eyes of these pupils. Two years later he again examined the eyes of all then remaining who were in the school at the former examination. Two years after that he made a third examination. Here was an intervening period of four years, and this record showed that, with the exception of a few cases of astigmatism, the eyes of these boys were universally *in better condition* than at the beginning of this period.

Still further he found that where astigmatism existed — which generally increases at the age of these youth — its increase had been less than is usually found to be the case. These experiments showed clearly that, with a large number of youth under proper hygienic conditions, the eyesight may be improved, altho the attention of the pupils is steadily and persistently confined to text-books. In this case, perhaps, one-half of the boys were pursuing the study of Latin, and many of them also Greek. Now, what were the conditions which produced this favorable result?

1. The light was admitted only from one side of the schoolroom, and that at the left side of the pupils as they were seated.

2. The quantity of the window glass was 10 per cent. of the surface of the floor. Many claim that the best conditions require a larger amount of glass than this. From wide experience and observation, I am quite inclined to think that pupils sometimes suffer from too much light, as well as in other cases from too little. In my opinion 10 per cent. of the surface of the floor is about the right amount for window space.

3. These windows were long and high. The schoolroom was thirteen feet studded. The windows were nine feet in length and the window-sills three feet from the floor. This arrangement of windows made the light far more effective. The schoolroom was forty feet in length — measuring the wall into which the windows were inserted — and was thirty feet in width, so that no scholar sat farther than twenty-seven feet from the window.

4. There was an entire absence of swiveled blinds. Such blinds are very detrimental to the eyesight. They cannot be made so as to shut out all of the sunlight, and the light, being admitted thru these cracks, crevices, interstices, between the slats, is painful and exceedingly injurious to the eyes. The windows had semi-opaque curtains of a drab or straw color, which, when drawn, shut out entirely the direct glare of the sun, but admitted sufficient light for purposes of study.

5. To these conditions of light were added proper heating, efficient ventilation, and an abundance of pure air. Twenty-five square feet of flooring was allowed for each school seat. That is, the floor contained 1,200 square feet, and the room had forty-eight seats. These conditions of a healthy atmosphere so directly affect the nerves and the mental status of the pupils as to produce no little influence upon the action of the delicate optic nerve.

Mind and body react upon each other. Healthy, vigorous, successful study, mental acquirement and mental development, are exceedingly difficult in an overheated atmosphere of impure, vitiated air, and, may I add, with a nervous, irritable teacher presiding over the room. Moreover, this nervous, irritable condition of the teacher is very often directly induced by the foul atmosphere of the room, which, by a normal and healthful condition, might perhaps be entirely avoided.

Our country is full of old schoolhouses, badly constructed, on wrong principles, with very little attention to proper rules for lighting and heating. In such cases not much improvement can be made. But, I submit to you, superintendents, that it is your sacred duty, from which you cannot exempt yourselves, when new schoolhouses within your jurisdiction are to be erected, to insist with all your power and influence that proper attention be paid, by the architect and the building committee, to this important matter of furnishing to the pupils — the youth who in the next generation are to have charge of all the affairs of this country — a proper amount of God's sunlight, which he has so generously distributed everywhere with such profusion; so that these innocent children be not deprived of this essential element of health and happiness in life, and their ability be not dwarfed to do good service to the communities in which their lives are to be passed.

SCHOOL SEATS AND DESKS

We come now to take up the second division of our subject: What is the proper method of seating the pupils in school, and what is the proper desk which they shall use in their work? I feel sure that few persons who have carefully examined this subject will object to my statement that this is not only one of the most important, but also one of the most difficult, questions that we can discuss in connection with our whole school system.

In some respects and in some directions great improvements have been made within fifty years past in the style and construction of school desks and seats. But, if I am not mistaken, the problem has not yet been solved. We have now cherry desks, where we formerly had them made of pine. We have now chairs with a hard wooden seat and a back, where we used to have an oak plank for a seat without a back. But, altho our modern desks and chairs look much better than did those in use half a century ago, and while they may be ***somewhat*** more comfortable, yet the main problem remains as unsolved today as it did in the boyhood of the oldest gentleman present. We have not yet invented a proper schoolroom chair, and nobody yet knows how to make a school desk.

In the old times a shoemaker sat upon a bench, hard at work with his hands and arms from morning till night. His seat was a hole in a pine board, covered with soft, flexible leather. That is hardly an ideal seat, but I have never seen a schoolroom chair half as comfortable as the seat of a shoemaker's bench. I hope some genius in this great pedagogical profession, some skilled mechanic, some gifted inventor, some Sir Humphrey Davy, or Eli Whitney, or Professor Morse, or some wizard like Edison, will yet invent a decent, comfortable, hygienic school chair. When it is done we will all take off our hats to the inventor. We will petition the government at Washington to grant him a patent, and if he should secure a moderate royalty from the manufacturers and live after his invention one-half the allotted age of man, he will die a multi-millionaire. I have, however, very little faith that any of us will live long enough to see the invention of a school chair which shall fulfill all the necessities of the case. I, therefore, propose to dismiss this part of the subject, not in disgust, but really in despair, thereby running the risk of acquiring the reputation of being a pessimist. I am, however, very sure that nobody can call me a pessimist on any other subject than this matter of a model school chair.

Let us, then, approach the subject of the school desk and see what difficulties we shall find there. First of all, the desk should not consist of a horizontal plane, but should have a proper slant. Well, so did the desk in the schoolhouse where I first attended school, and that was before most of you were born. In the next place, the desk should have a lid fastened by hinges, and below it a good-sized box in which to keep the books and papers of the pupil. But, again, the desk in the schoolhouse where I went when I was five years of age was constructed after this fashion.

But we have made within a few years past one grand improvement. We now have adjustable desks and chairs, and, without fear of contradiction, I maintain that it is the duty of every superintendent in the wide land, when new desks and seats are purchased, to insist on having adjustable desks and seats, and no others.

This duty surely you ought to attend to. The superintendent cannot innocently shirk his responsibility in this respect. I repeat, he should insist on adjustable desks and seats whenever new furniture is to be purchased for any schoolroom. This, however, goes but a short distance compared with what is absolutely needed and is of the greatest importance.

This adjustability is yet only in one direction. It is a beginning, but I fear the end is far distant. The adjustable desk and seat today have reference principally to the proper height from the floor. You remember the story of some members of Lincoln's cabinet. They had discussed at considerable length, but without coming to a conclusion, the important question how long a man's legs ought to be. They finally referred the matter to Mr. Lincoln as one competent to judge. It is said that the president expressed gratification that they had brought the question to him. He said that he had given a good deal of attention to it, being somewhat interested personally. They asked him if he had come to a decision about it, and he answered, "Yes," he had. They then inquired how long a man's legs should be. Lincoln said: "A man's legs should be just long enough to reach the ground." Now, we agree with Mr. Lincoln upon that point. A child's chair should be just high enough for his feet to rest easily on the floor, and the desk should be of such a height as to allow the forearm to rest upon it in a comfortable position for writing. Here is the advantage of the adjustable desk. But, good friends, adjustability should go much farther than that. The school desk is for a double purpose, and the one purpose seems to be inconsistent with the other. The school desk should be adapted *to study* as well as *to writing.*

We have today adjustable desks that are proper and convenient for the exercise of writing. The child may sit in a normal position, with his paper before him upon the desk; his right hand may hold the pen, and he may write in his copy-book, either vertically or on the slant, with comfort, ease, naturalness. So far we have succeeded. The trouble, however, comes when we ask that boy to take up his book and study his lesson, sitting at the same desk. Now a new problem confronts us. The desk should be so constructed that the book shall be held by it at a proper height, the right slant, and the correct distance from the eye. The seat must compel the child to sit upright, in a normal and healthful position. And then, if the desk can fulfill the conditions just named, holding the book for the child at a proper distance from the eye, and not allowing him to bring it too near the eye or to carry it too far off, as is so often the case when the child holds it in his hand; if, also, this desk holds the book with its page perpendicular to the line of vision — then you will have a desk that can properly be used for study in the schoolroom. Until this is achieved, our school furniture is at fault, and we are unable to solve this important problem.

As I design this paper to be practical and not theoretical, I have ventured to call your attention only to some of the more apparent difficulties connected with school seating, as I have encountered them in my own experience. Following this idea, I will ask your attention to one more point of difficulty, and it is gratifying to me to say that in this you can attain entire success.

I refer to the proper distance between the back of the seat and the desk. I greatly fear that, as simple as this problem is, many of us have not yet solved it. If you will merely turn your attention to the case, there is no difficulty in easily securing the needed improvement. Everywhere I go, thruout the country, north and south, from Maine to Puget Sound or the Golden Gate, the little pocket rule, twelve inches in length, which I always carry with me is whipped out, and the distance between the back of the chair and the front edge of the desk is measured. I am frank to say to you that it is an exception when I find this distance to be correct.

The problem is so simple that I need only to state it to you and give what I have found from my own experience to be the proper distance. For children in the lowest primary the distance between the back of the chair and the edge of the desk should be not over *nine inches*. Yet I often find it twelve, fourteen, and sixteen inches. The consequence is, the child either sits on the front edge of his seat in order to use the desk before him, or he sits back against the back of his chair in an unnatural, constrained position, calculated to produce spinal curvature. Between the primary school and the higher grades of the grammar school this distance should vary only from nine inches to twelve. Twelve inches' space is enough for grammar-school pupils, and it is seldom in the high-school grades that any stout pupil will need more than thirteen inches' space between the chair and the desk. Quite lately a chair has been invented which has a horizontal adjustment to remedy this defect. It, therefore, only needs knowledge and attention to make this distance what it ought to be.

I most earnestly ask that, as superintendents, whose duty it is to attend to these important affairs, you make whatever changes you find needful in the schoolrooms under your care in this respect. In this brief paper I have discussed in a practical, offhand way only three points relating to schoolroom hygiene — the light, the seat, and the desk. My experience, however, tells me two things: first, that these points are of great importance, and, second, that they are almost universally neglected. I wish it were in my power to hold the superintendents of this country responsible for the introduction of the best school furniture and the proper adjustment of the same to the wants of the pupils. Could that be done, a strong impetus would be given to the cause of education, and far greater results would be accomplished than in the past.

DISCUSSION

F. Louis Soldan, superintendent of schools, St. Louis, Mo.— It is difficult to discuss, with any degree of definiteness, the clear principles laid down in the paper just read, because there is an honest difference of opinion respecting some of the leading propositions in regard to school hygiene. In presenting candidly some of the points of difference, among the many points of agreement, with the paper, I desire to have it understood that I do not claim for the views to be advanced any weight as compared with the views expressed in the paper, except what your approval or disapproval will give to the relative views. It may be that in some of the points of difference the writer of the paper is right, and the authorities to be quoted are wrong. A large number of the propositions concerning school hygiene will form debatable ground.

In regard to the lighting of schoolrooms, the great authority on the hygiene of the eyes of school children, Dr. Cohn, of Breslau, says pointedly that there can never be too much light in the schoolroom. The meaning of this phrase is evidently not that there may not be at times too much light for the children's eyes, but it must mean that it is easy, when a schoolroom has sufficient window space, to prevent the excess of light by blinds or curtains, while it is not true, *vice versa*, that, when there is insufficient window area, light can be supplied in other ways. A superabundance of window space will do no harm, since it is easy to shut out some of the light; a lack of window space is absolutely objectionable.

Many things depend on sufficient lighting, as, for instance, the preservation of the eyes, the correct posture of the body, which is impossible if the child has to turn toward or away from the source of light in order to see the book or letters. But there are other, less evident, but equally important, points to be remembered in connection with the lighting of schoolrooms. A sufficient amount of light arrests the development of bacteriæ; it facilitates cleaning, and renders it easy to detect derelictions of janitors.

No absolute statement can be made in regard to the extent of window surface in proportion to floor space, since varying conditions, such as the width of the street, the height of the houses across the way, the direction of the windows, modify every rule that can be laid down. The Commission de l'hygiène scolaire (1882) demanded that the windows should be so placed that from the last seat in the room the child can still see perhaps thirty centimeters of the sky.

The most radical demand in regard to the relation between window space and floor space seems to be that the former should be at least one-fourth of the latter, and that, moreover, the pupils most remote from the window should be able to see the sky. The most reliable tests, however, are the photometric tests, taken in each room, and for which apparatus is now being introduced by government inspectors of European schools. While one-fourth of the floor space devoted to window space represents an ideal condition, which I believe can be but rarely complied with, one-fifth or one-sixth should be the minimum window space. I cannot recall any authority which approves of a window area as small as one-tenth of the entire floor space. New inventions, however, are being made that may possibly change considerably the figures given before. I refer to the so-called prismatic glass that has been placed on the market of late, and which is said to throw light from the windows into the room a much greater distance than the ordinary glass.

Location of windows.—The windows should be located at the left of the children. If they are located in the front of the room, they blind the children; if in the back of the room, they blind the teacher. Moreover, if in the back of the room, they cast a shadow on the books in front of the children. On the other hand, windows at the back, located high above the floor, facilitate blackboard inspection in the front of the room. Windows at the right would throw the shadow of the hand on the letters which the child is writing. To have windows both at the left and at the right would be serviceable, for the purposes of ventilation, and for the cleaning of the buildings, but the double shadows cast by objects are not good for the eye, and, therefore, the light from one side at least must ordinarily be closed out by blinds.

If there are windows on one side only, the wall space between the windows should be as narrow as good construction can make it. In the Dutch schools one and one-half feet between the windows is the maximum. The best construction would be iron or steel construction, so that the windows have above them an iron girder which, supported by the iron posts between the windows, will in turn support the masonry above. In this way the whole side of the room can be filled with windows. The top of the windows should be as high as it can possibly be placed. The light from the top is the most useful for the children sitting far away, and the arched top of windows is, therefore, objectionable. This construction diminishes the amount of the most important portion of the light. For similar reasons, the placing of flowers on the window sill is open to considerable objection. It may diminish the amount of light considerably.

The window panes should be of large size, to reduce the woodwork which obstructs the light to the smallest possible quantity. The beveling of the outside walls where they bound the window frame will help to admit additional light.

The glass itself absorbs much of the light, and transmits but a fraction. A double pane of plate glass will absorb 21 per cent. of the light, matt glass 27 per cent., that which is called cathedral glass 12⅔ per cent. It is clear, from the fact that glass does not allow all the light to penetrate it, that the best and clearest glass should be used for window purposes. It shows, moreover, the necessity of the regular and frequent cleaning of windows.

Window blinds should not be of dark material, because even white blinds absorb 87 per cent. of the light.

VENTILATION OF SCHOOLROOMS

BY ASSISTANT SUPERINTENDENT A. P. MARBLE, NEW YORK CITY

Hon. Yung Wing, a Chinese diplomat long resident in the United States, was educated in this country and graduated at Yale. He once said to his old teacher, Mr. Hammond, of Monson Academy, Mass., that it would have saved his countrymen untold millions of money if they had understood the principle of the draft in chimneys; they had always built fires on open hearths and braziers. In health and comfort, if not in money, an equal amount would be saved in this country if everybody understood the simple principles of ventilation.

In ventilating a schoolroom, the problem is to supply for every pupil about thirty cubic feet of pure air per minute, at about 70 degrees Fahrenheit in winter, without producing drafts. And the conditions of the problem are various: between the North and the South; in summer and in winter; on the windy prairie and in the shelter of the hills; in the city and in the rural district. The principle is the same in each case; the application of that principle must be modified to suit the various conditions.

In the schoolrooms of this country every known variety of ventilating apparatus may be found, from nothing except the doors and windows, to systems so elaborate and complex that the air itself seems to become confused among the labyrinthine flues, and ducts, and passages. It is not to be expected that every teacher will understand all these; but every teacher should learn at once the provision made for ventilating the schoolroom that he occupies. On inquiring the purpose of a particular register or flue in the walls of the schoolroom, we frequently hear the teacher say that it is designed for either the ingress or the egress of either fresh air or foul, warm air or cold—he doesn't know which; and this answer represents the acquaintance of a majority of the teachers with the means of ventilation in their own schoolrooms. They know as little about it as the Chinese knew about chimneys.

In recognition of this prevailing ignorance, automatic regulators of heat and ventilation have been provided in some schoolrooms at great expense; but the thermostat, tho useful, can never take the place of an intelligent teacher. As the first step, therefore, in improving the ventilation of schoolrooms from one end of the country to the other, my first proposition is this: Three pieces of ribbon half an inch wide and a quarter of a yard long (for patriotic reasons, red, white, and blue) should be tacked above every hole in the wall, above every window and every transom, thru which the air may pass either outward or inward. By this simple device the teacher may see at a glance what is going on. He may not know what the various registers, flues, and ducts are meant to accomplish, but he *can* know what they actually do; and in the absence of the ribbons he may paste up narrow strips of tissue paper—just as good as long as they last. This simple expedient is far more valuable than it may at first appear. It constantly calls the attention of both teacher and pupils to the motion of the air; it is a protection from drafts; above all, it daily invites to a study of the schoolroom air.

My second proposition is that the heating and ventilation of schoolrooms should be a required study in every normal school and a subject of examination for teachers. As said above, teachers generally know but very little about the means employed to ventilate their rooms, how it is intended to operate, or whether it works at all. And why should they know when they have never been taught, nor had any particular chance to learn?

The movements of the atmosphere are as interesting as the study of the motions of Saturn or the moon, and far more practically useful. As between astronomy and aërology in a normal school, let us have aërology. Notice the particles of dust, or a wreath of smoke, seen in the sunbeam as it enters a partially darkened room. At the flight of a fly the particles dance as if alive; at a breath the wreaths circle and curl in fanciful shapes like hieroglyphics. Contemplate now the blizzard that uproots trees and sweeps to destruction houses, villages, and even the masonry of great cities. Both the smoke wreath wafted gently upward and the devastating tornado exhibit the effect of heat upon the air; and this elastic, expansive, and sensitive air is the subtle medium to be directed and controlled in ventilation. Who says, now, that aërology, ventilation, is not an essential study for normal schools?

The methods employed in the ventilation of schoolrooms are of two kinds: the natural method, and the artificial or mechanical method. The first of these is the more simple, and generally it is less expensive; the last is the more costly at first, but more effective, especially in large buildings.

The so-called natural ventilation consists of a heated flue, or series of flues, in which a draft is produced. It depends upon gravity alone; but it is sometimes supplemented by the force of the wind. It is not natural in the absolute sense, since it depends upon the construction of the schoolhouse.

The heated air in the flue expands; it occupies more space and is, therefore, lighter than the colder air; this colder air, by its greater weight, falls and forces upward the heated air, just as a balloon is raised by the downward pressure of the surrounding air, and just as a cork is raised by the downward pressure of the water on which it floats. The floating cork is lighter than an equal volume of water, the balloon is lighter than an equal volume of air; and, in like manner, the heated air is lighter than an equal volume of cold air, and so the lighter air is raised or pushed upward by the heavier. The heated air does not pull upward thru the flue; it is itself pushed up. Tho in a sense the draft is caused by heat, in another and a broader sense the draft is caused by gravity. With an open fire, if the flue is damp and cold when the fire is first lighted, the chimney does not draw because the warm air becomes chilled before it reaches the top of the chimney, so that the downward pressure in the flue is as great as the upward; on the other hand, if the room is closely built, so that no cold air can enter thru the crevices, then the chimney will not draw because the lighter air cannot be lifted up the chimney. A ventilating flue, then, is constructed upon the same principle as an ordinary chimney.

The jacket-stove is simply an ordinary cylindrical stove surrounded with a sheet-iron cover placed several inches away, reaching to the floor and open at the top. Below the stove a flue extends to the outer air. The stove heats the air within the jacket; the warm air rises into the room, and the cold air enters from the outside to become heated, and rise in its turn. Of course, being lighter, the warm air passes to the top of the room. If now the room is tightly closed so that no air can escape, the warm air will soon cease to come inward thru the jacket, because the room is full. By lowering a window at the top, the warm air from the jacket will pass outward and neither warm nor ventilate the room. On the other hand, if the chimney flue or any heated flue be opened near the floor, then the air is withdrawn from the bottom of the room where it is coldest; and this makes room for the heated air to enter again thru the jacket. In effect, the jacket is a chimney, so to speak, to bring warm air into the room, and the chimney or ventilating flue withdraws the air just as it does with an open fire. By these appliances the air of the room is constantly changing—the warm air from the jacket rising to the top of the room, and then gradually settling and warming the whole room as the air of the room is exhausted from the floor thru the ventilating or exhaust flue. The jacket is the supply ventilating flue. It has been demonstrated that in rooms of ordinate or moderate size the warm air circulates best to all parts of the room, producing a uniform temperature, if the opening or register of the exhaust flue is directly below the register, or top of the jacket, where the warm air enters the room. It should be noted, however, that the room must be tightly built if this uniform temperature is to be secured; and that the warm air which strikes the cold glass of the windows in cold weather parts with its heat at once and falls to the floor. The falling of this chilled air upon the pupils near the window is as harmful as a cold draft thru the windows; and it is often thought to be such a draft. Chilling of the air by the windows interrupts the uniformity of temperature in the room. The remedy is double windows; in cold weather they pay for themselves in a single winter, both in economy of fuel and, especially, in great comfort.

The jacket-stove illustrates every other method of natural ventilation by means of heated flues. The hot-air furnace is merely a large jacket-stove placed in the basement. It has a cold-air supply on the same principle; and the warm air rises from the furnace to one or several rooms thru metallic ducts. These ducts frequently open into the room thru registers in the floor. The registers should never be placed in the floor, because they inevitably collect dust. They should be placed in the wall seven or eight feet above the floor, because the warm air passes to the top of the room in any case, and the elongated flues produce a better draft.

Again, steam coils or radiators, inclosed each in a box thru which the outer air passes to be warmed, are merely another form of jacket-stove; and they operate upon the same principle, so far as ventilation is concerned. If the steam radiators are collected in one large room in the basement, from which ducts convey the warm air to to the several schoolrooms, then this large warming room is, in principle, only a jacket-stove or steam furnace. In every one of these—the jacket-stove, the furnace in the basement, the steam radiators distributed, and the steam radiators collected in a single room in the basement—the warm air is carried thru flues to the top of the room by gravity, that is, by the pressure of the heavier cold air, which makes the warm air to rise.

And in each of these cases the warm air will not enter the room unless a corresponding volume of air is constantly withdrawn. As already stated, if the windows are lowered at the top, or if a ventilating flue opens from the top of the room, the warm air simply passes outward without either warming or ventilating the room. Hence it is apparent that the air must be withdrawn, or exhausted, thru flues opening near the floor; and these flues must be heated in some way, to produce an upward draft.

The wind has an effect upon every one of these modifications of the jacket-stove. If it blows directly upon the radiators, the air will enter the room before it is warmed, whether the radiator be the stove, the furnace, or the steam coil. Moreover, the rooms on the windward side of a loosely constructed house will feel the pressure of the wind, and the warm air will not rise from the radiators thru the flues. The effect of the wind must, therefore, be provided against and discounted in advance.

There are also various devices in use for utilizing the force of the wind in producing drafts in chimneys and ventilating flues, and so forth. The trouble with them all is that they are effective only on windy days, when they are least needed.

The fault of this natural method is that it depends upon a wide difference of temperature between the outer air and that of the schoolroom. It does not operate effectively in still, mild weather, and in such weather the chief dependence must be placed upon open windows; but its simplicity commends it for small buildings, and in places where motive power is not easily accessible.

Artificial or mechanical ventilation is like the natural method just described, in respect to the radiating surface and the conducting pipes or flues, both for the ingress of fresh, warm air and for the exit of vitiated air. It differs from the natural method in that it propels the air either inward or outward, or in both directions, by means of a fan, or blower, or a form of air-pump, driven by steam or other power. It, therefore, acts uniformly, and independently of wind and weather.

There are various forms of fans driven by steam or electric power; but it is unnecessary to describe them here. They are sometimes used to force the air over the radiators and into the schoolroom; this is called the *plenum* system. Sometimes the fan is used to withdraw the air from the schoolroom thru the ventilating flues or ducts; this is the *exhaust* system.

The exhaust fan may withdraw from the room thirty cubic feet per pupil each minute. The vacuum so created should be supplied thru the warm-air or radiating flue; but practically the air comes in partly thru the crevices in the doors and windows. The exhaust system is a failure when used alone.

The plenum system forces the requisite quantity of fresh, warm air into the room every minute. If the exhaust flues are properly heated, a large part of the vitiated air will pass out thru these flues; but a certain proportion of air will be forced from the room thru other orifices, with no serious consequences, and yet with some interruption of the best ventilation. The plenum system is vastly superior to the exhaust system, when each is used alone; but the best results can be attained by a combination of the two.

When thirty cubic feet of air per pupil per minute, and at the proper temperature, are forced into a schoolroom, and an equal volume of air is withdrawn by means of fans, it would seem that the ventilation must be perfect; but there are difficulties still. In the first place, a very delicate adjustment of flues is necessary, if one central fan is to force the warm air uniformly to twenty or more rooms variously located and at different distances; and an equal nicety of adjustment is necessary for the exhaust fan and its flues and ducts. If this adjustment is successful: in the second place, we meet the difficulty of drafts in the schoolroom. In no case should the air move at a greater velocity than two hundred feet per minute. Even at this rate, currents may be felt in some part of the room, unless the incoming air is dispersed at the ceiling, and the outgoing air is withdrawn thru registers a yard or two distant from the pupils. If all drafts have been avoided: in the third place, it remains to be determined whether the air is changed every fifteen minutes in every part of the room. It is not certain that this result has ever actually been produced; but the combined system of forced ventilation, if properly applied, will accomplish it, if it ever can be accomplished.

Thus far we have considered this subject mainly respecting a cold climate in winter. In warm climates the combined fan ventilation is specially desirable. Electric power is so common that all cities and most villages can make use of it in schoolhouses. With artificial refrigeration, which requires little beyond a certain amount of steam or other power, the plenum system might be used to cool the schoolroom in summer as well as to warm it in winter.

But at present no schoolroom ventilation known to me is perfect. Most of it is sadly deficient, and much of it will continue so for a long time. We must improve it as fast as possible, and in the meantime we must try to develop the "adjustable boy;" that is, by recesses, by physical exercises, and by hygienic living, the boy must be made physically so strong that he can breathe the poison of impure air and sit in drafts a part of every day, and grow fat!

I wind up with the following proposition for my brethren to chew and digest:

1. Most teachers know but little about ventilation, and they are not alone in this.

2. Red, white, and blue ribbons for ventilating vanes should hang and float above every schoolroom air-hole.

3. Aërology should be a study in the course of every normal school.

4. Natural ventilation is defective; but it must be used in a majority of schools, and it should be the best of its kind.

5. The exhaust system of fan ventilation should never be used alone.

6. The combined system of mechanical ventilation is the best now known.

7. As to a few details:

(1) In cold climates all schoolroom windows should be double.

(2) The ingress of fresh air should be at least eight feet from the floor; and, so far as possible, the current should be thrown against the ceiling and distributed.

(3) The exhaust should always be near the floor, if possible only six inches above.

(4) All registers should be upright—never in the floor.

(5) A current of air thru a register at a velocity of one hundred or two hundred feet a minute will feel cold to the hand, tho at a temperature of 90 degrees Fahrenheit. Hence—

(6) No child should sit within a yard of a ventilating register.

DISCUSSION

State Superintendent S. M. Inglis, Springfield, Ill.—Could I rehearse to you what has come under my personal observation, as superintendent of public instruction, while traveling thru the state of Illinois (and this would possibly be but a sample of what is seen in almost every state in the union), it would lead us to more fully appreciate the truth that this is, indeed, a serious question, and would give us a more decided conviction of our duties which lie in this direction. But, like other duties often repeated, we grow careless and viciously neglectful.

We well know some of the conditions necessary to secure proper sanitary conditions in the location of the school building: (1) elevation in position; (2) proper construction; (3) position in relation to other things; (4) general environments.

All these things are recognized in the expression of our opinions, but do we follow out these suggestions when we project our final actions? Are we not tempted too often to cater to the wishes of neighbor Jones, who insists that the site is too valuable to be given for a mere school building—it cuts into a valuable piece of corn land? Another selection is made, and a corner hazel-brush patch is set off; true, it is down by the side of a stream that runs part of the year; while the ducks and geese do not forget to bask in close proximity to the "Brush College," as the rustics are wont to style it, and, that it may have some style about it, the vigorous rooter cannot forget his wont.

The schoolrooms are often not large enough to accommodate the school children who attend in the district. No proper means of ventilation is arranged, for the quantity of air seems to have been a matter of minor or limited consideration; and very soon it becomes exceedingly impure. The process of poisoning now begins. Every hour of confinement of these children in such a room is poisoning the air, and lessening the capacity of the child to do its work, stupefying its brain power. A broken pane of glass, or a weatherboard torn from the building, is a godsend to the poor inmate.

Many teachers do not know, or forget if they ever did know, of simple contrivances or devices for ventilating their schoolrooms, and the poisoning process continues. And yet the preservation of health should be of prime importance when the erection of a schoolhouse is under contemplation. Everything else — cost, comfort, conveniences — should be subordinated to this. Unless the children can be educated in a way compatible with their health, it were better far to tear down our schoolhouses at once and abolish our whole school system.

A schoolroom twenty by thirty feet in size, ten feet high, would contain 6,000 cubic feet of air. Forty pupils would consume this, and render it unfit for sustaining the bodily functions, in just thirty minutes. Yet a larger number of pupils is often confined in a smaller room without the possibility of any change of air. Disease is engendered, delicate organs of the body are impaired, virulent poison sows the insipient seeds of death. Thus, permit me to say that in every schoolhouse without proper means of ventilation there is a slow and subtle poison which enters the blood and brain of the pupils, and saps the very foundation of life. There can be no escape from its deleterious influence. Responsibility goes with duty, and there is no discharge until the duty is done, and duty is done only when perfectly done.

We need to go back to the primitive days and to begin anew. Open up our houses; throw open our windows and our doors when necessary; let in the sunlight. Let the members of every household rejoice that a new schoolhouse is talked about. Build none other than a first-class modern house. Let it be commodious, with plenty of light and heat. Do not be parsimonious. Construct it a little larger than your needs require. Do not forget to plant graceful shade trees in the generous grounds which, of course, you have provided. Spread cheer about the school children, and you add joy to every household. By proper conditions of health, we add a world of wealth not measured by silver or gold, but rather by years of a good long life. * * * * * * *

Fellow-schoolmen, we owe it to ourselves, to our fellow-men, but more especially do we owe it to our children and to our neighbors' children, to train them, not only morally and mentally, but physically; to see that they make the world morally better by having come in contact with it. Do you believe that the school is the prime factor in this future upbuilding? Do you realize that education forms the common mind; that the common school is the palladium of our safety, the polar star that guides the ship of state into the harbor of safety? Then give the children these proper and pleasant environments, and create a homelike attachment to the shoolroom — a real love for the next dearest place to the real home.

J. L. HOLLOWAY, superintendent of schools, Fort Smith, Ark.— Someone has very pertinently said that every schoolhouse should be constructed with reference (1) to its lighting, heating, and ventilation; (2) to the convenience of its arrangement, and (3) to its architectural adornment. That this order, in a majority of instances in cities, was exactly reversed ten years ago is true beyond question. Indeed, it might be said with equal truth, as it is sometimes said of certain people, that the country schoolhouse has been built without regard to God or man, and wholly in the interest of his Satanic majesty. It is conceded, with some humiliation to our national pride, that the great authorities on this subject, with few exceptions, are found beyond the Atlantic. It may be that our over-enthusiasm for big farms, big factories, big cities, and big buildings has been so engrossing that we have not felt the necessity of giving attention to matters of small detail. The outcome is that we have failed to make provision for the economic productions of farm and factory; we have been more greatly concerned in platting new additions to our cities than we have in suppressing the ward heeler and political corruptionist; we have been content to multiply schoolhouses for the universal education of the masses, giving small heed to the necessary conditions of physical comfort and mental stimulus of the boys and girls who occupy them. The death rate among children from five to fifteen — the healthiest decade of life — in all our large cities is greater than that in European cities. Whether the neglected sanitary condition of our schoolhouses has anything to do with this cannot be fully demonstrated, but the impression prevails among medical experts that it does.

Before a line is drawn, a blue-print made, or a brick laid, it is necessary to know (1) *the amount of air vitiated by an individual in a given unit of time.* By carefully repeated experiments, this has been ascertained to vary with age — a child requiring 2,000 cubic feet and an adult 3,500 cubic feet per hour. The "impurity limit" is placed by English experts at six parts of carbon dioxide to every 10,000 parts of air, and by the Germans somewhat higher. Since fresh air contains, according to Parkes, four parts of carbon dioxide to every 10,000 parts, it is seen that exhalation needs to double this amount at most to pass the danger line. This fact established affords a basis for determining adequate room dimensions; therefore it is necessary to take into consideration (2) *the space limit which must be accorded to each child.* This likewise varies with age, the usual allowance being 200 cubic feet for a child and 300 cubic feet for an adult; or, reckoned in floor area (the ceiling being 13 to 14 feet high), each individual should have from 12 to 20 square feet. Suppose that we wish to provide a room for fifty pupils. If each is allowed 15 square feet of floor area, the room will be 25×30 feet. If the ceiling is 14 feet, each child is provided with 210 cubic feet of space. This amount of air is vitiated to the "safety limit" every six minutes. Hence, satisfactory ventilation requires that the air of the room be completely changed as often as once in every six minutes, or about ten times per hour. Such being the case, (3) *a knowledge of the laws of air currents is absolutely necessary,* for upon this will depend the length, position, number, and areas of cross sections of the inlets and outlets. It is immaterial what system of heating and ventilation is used: a full knowledge of the principles just stated are indispensable. It is due to the ignorance of these things that we have churches, schools, theaters, and hospitals containing from twenty to seventy-five, and even 100, parts of carbon dioxide to the 10,000 parts of air. Were it not for the infrequency, or short periods, of use, they would be a constant menace to the health and life of their occupants.

Heating and ventilation, tho antagonistic, cannot be considered apart, since weather conditions of all sections of the country necessitate fire during a part of the school year.

Of course, natural ventilation is the ideal system, but the foregoing facts indicate that this is out of the question for the schools during two-thirds or three-fourths of the scholastic year. The whole problem, therefore, resolves itself into two factors, viz.:

1. Provision for supplying and distributing the requisite amount of fresh air, and
2. Provision for discharging unwholesome air.

The practical question is, How may we produce a breathing schoolroom? Heat is the constant in the problem. It may be applied directly to the fresh air by means of stoves or furnaces, or the air may be warmed by steam-heated or water-heated surfaces. Since 80 per cent. of our school population is rural, I think it quite safe to say that at least 90 per cent. of the schoolrooms of this country rely upon stoves or hot-air furnaces for heat and ventilation. This estimate is based on the fact that practically all rural schools, and a very large percentage of village and town school buildings, are heated by this method. In view of the fact that heating by hot air seems to be the only feasible plan for the single room, the simplest, most economical, and best system which the inventive genius of experts can devise should be made known. Even then I have serious doubts that the grave evils now existing can be overcome, unless legislation puts the force of compulsion behind the movement to secure scientific heating and ventilation. I dare say that less than 5 per cent. of the 200,000 rural schoolhouses of the country today use anything other than window and door ventilation. One of the best plans yet suggested for the single room, in my judgment, is that described by Dr. Marble in his report to the Department of Education in 1891 under the caption "Sanitary Conditions for Schoolhouses." In this plan fresh air enters the room thru ducts which converge under a jacketed stove. The air thus heated is thrown into the room about eight feet from the floor, thus avoiding direct drafts upon the pupils. After circulating, the vitiated air is drawn off thru the cloakrooms into a ventiduct warmed partly by the adjoining flue, and partly by a sheet-iron diaphragm, upon which the hot air impinges as it rises around the stove. To my mind, the most objectionable feature about this is that, in the attempt to make the foul air do service in drying the wraps, there is a strong probability that they will become impregnated with the organic impurities thrown off by pupils.

It is generally agreed that the most economical, and in many respects the most satisfactory, method for larger buildings is by the direct-indirect system of steam heating. In this, the fresh-air inlets should come from all sides of the building, and be furnished with valves, so that the fresh-air supply may not be disturbed by heavy wind currents. The ducts should open into a common space, from which the air has free access to all the batteries of steam coils, whether they be distributed, or whether they be concentrated into one coil room. The sanitary conditions of the surroundings should determine whether these ducts open on the ground level, or at higher points in order to insure wholesome air. In these coil rooms each fresh-air flue should have its own set of coils, separated entirely from other coils by means of sheet-iron partition. This is necessary to prevent the long flues (which have the strongest drafts) from robbing the supply belonging to the shorter flues. The amount of heated surface in each section of the coil rooms is regulated by valves, which enable the engineer to turn on or cut off a part or all of the steam. In the event the construction of flues calls for horizontal sections, it is wise to put an extra coil in them to increase their aspirating power. A close-fitting valve, which may be raised or lowered by means of a chain passing into the room, should be a part of the attachment of each coil box. This valve is used to regulate the amount of cold and warm air, respectively, drawn into the fresh-air flue. With the proper construction of the fresh-air chamber and flues, and with the provision suggested to regulate the warm-air supply, it is a rare case for a building of ordinary size not to receive a sufficient amount of wholesome air. If the supply should prove inadequate, nothing less than the plenum system of propulsion will meet the demands of the case. It is thought by many experts that enough direct radiating surface should be placed in the rooms near the windows to counteract the leakage around the doors, windows, and other sources of cold air from the outside, and thus prevent a downward sweep of cold currents formed by the exposed wall of the room.

The discharge of the vitiated air is effected by means of a foul-air shaft opening near the floor on the same side of, but at the opposite corner from, the fresh-air inlet, and another, of a smaller aperture, near the ceiling. The former outlet should be a little larger than the inlet, to prevent perceptible drafts over the floor, and should be provided with a steam coil or loops of pipe, or a small stove placed near the bottom, to create suction sufficient to empty the room as often as eight or ten times per hour. As a rule, it is better to have the heating apparatus of these foul-air shafts independent of the heating system, so that an aspirating effect may always be produced regardless of weather conditions. Otherwise reverse currents may sweep the vitiated air down into the coil rooms, from which it may be drawn into other rooms, thus doubling the amount of impure air of particular rooms.

The vacuum system is likewise employed to discharge buildings of foul air, but its chief disadvantage is that it increases the leakage of rooms from the outside, thus requiring an extra amount of heated surface to make up the difference. The additional cost of the plenum and vacuum system, which may be employed with any method of heating, has prevented very general adoption, tho Professor Woodbridge has computed that the additional cost per pupil in the Lynn High School is only two and a half cents a day.

CONTAGIOUS DISEASES IN SCHOOL

BY T. A. MOTT, SUPERINTENDENT OF SCHOOLS, RICHMOND, IND.

Herbert Spencer has said that "the first requisite of success in life is to be a good animal, and" that "to be a nation of good animals is the first condition of national prosperity." As the nation is an aggregate of individuals, the history of a nation is, in a certain sense, a history of its individual units. If it is our duty to educate the minds of the children, it is equally a duty to care for, protect, and train their bodies.

Our people believe that the open schoolhouse, free to all and attended by all, is the gateway to progress and national prosperity, and the best security for the liberties and independence of the individual citizen as well as of the state. All will admit that it is the sovereign duty of the state in this republic to provide the best educational facilities which the world's experience has devised for every child, not as a "benefaction, but in satisfaction of the natural and inherent rights of American citizenship." It is clearly fundamental that the state is bound to see that a suitable school is maintained within the reach of every child, and that the house and its management in their hygienic relations are above reproach. The duty of the state does not stop with the furnishing of a teacher and a room, but the children are entitled to a reasonable protection from disease, and to a physical training and development. For one to make a feast and invite his friends in large numbers to attend, and then carelessly permit poison to enter the food that is placed before his guests, producing sickness or death, would be condemned by all as criminal carelessness. Equally as gross a crime is it if the state, thru its officers, opens a school and invites, yea goes into the highways and compels, the children to come in, and then, thru criminal indifference, permits the poison of disease to strike down the members of the school.

Simultaneously with the annual opening of schools, diphtheria, measles, mumps, scarlet fever, and many other communicable diseases usually increase. This is caused partly by the neglect of school officers to carry out known hygienic laws in schoolhouses and about the school grounds. The congregation of large numbers of children into houses whose rooms and furniture are unclean, ventilation bad, and drainage inadequate, will always tend to spread poisonous germs of disease. Some pupils in the school may have just recovered from some communicable disease, or others may be from families that have been smitten, and, being infected, they transmit the germs to those around them who are susceptible.

The most common communicable diseases are cholera, yellow fever, small-pox, scarlet fever, diphtheria, tuberculosis, typhoid fever, measles, mumps, itch, and certain diseases of the eyes and scalp.

The leading scientists of the country agree to the following statements as to the manner of infection:

Cholera and yellow fever are contracted in infectious districts rather than by contact with the sick. They are rarely communicated by a sick person to his attendants. In infected places the poison seems to be given off by the soil or from collections of decomposing organic material. In case of cholera, discharges from the sick are in a high degree poisonous to water and food.

In case of small-pox the disease is contracted by exposure to the emanations from the person of the sick, or from clothing that has been in use by the sick, or has been in their vicinity. This disease has, however, to a great degree lost its danger where the rules with regard to vaccination are observed.

In scarlet fever the poison is given off from the bodies of the sick as in small-pox. But there is no vaccination that will be of any aid in this disease. The patient may communicate it during the whole period of sickness or of convalescence. Clothing that has been used by the sick, or has been near them, is apt to contain the poisonous germs. These germs will retain their dangerous character for months after they have left the patient. Clothing that has been packed away for months or years may communicate the disease.

In diphtheria or membraneous croup the poisonous germs are given off from the affected surfaces, which are usually in the throat or nasal passages. The discharges from these surfaces are especially dangerous. The germs may be carried a short distance by the breath of the patient. All pet animals and clothing that have been about the sick are extremely dangerous. The poisonous character of the germs will last for years in clothing or in buildings that are not properly disinfected. It seems extremely probable that the diphtheritic germ or poison is capable of increase, independently of the sick patient, in the mouths of persons not susceptible to the disease; in damp places, such as sewers, cellars, and especially under old houses if the floor comes near the ground, leaving a damp, poorly ventilated space; and in accumulations of filth about the house. At all events, the disease often clings to such buildings regardless of all attempts to disinfect the premises. There can be no doubt as to the influence of bad hygienic conditions in maintaining the infection when once the disease has been started, and it is possible that they may at times originate it under certain conditions.

In the case of typhoid fever, as in the case of cholera, the poisonous germs are contained in the excretions of the body, especially the alvine discharges. From these sources the water is liable to be contaminated, and from the water the milk and food. Besides, contaminated water, impure air, and gases are a great factor in extending this disease. It is known that this poison is in a sense volatile and is carried by the air, and is often known to be in foul gases arising from sewers, privies, and so forth, and that breathing these poison-laden gases will often produce the disease in those who are susceptible.

Tubercular consumption is acknowledged by most scientists to be a communicable disease. The sputum arising from infected lungs is surely poisonous to susceptible persons. This sputum dries and, becoming part of the dust of the room, is inhaled by all. Or the poison may be transferred by means of drinking cups and pencils to the mouths of others. This is not usually named in the list of communicable diseases that should exclude persons from the schoolroom. But it is now believed by the best physicians of the age that pupils and teachers having this disease should be excluded from all schools. It has been said that more persons die from tuberculosis than from all other diseases usually named as contagious. In cities where all afflicted with tuberculosis have been excluded from school the number of cases among children has greatly decreased.

The poisonous germ from measles arises from the skin, and is also thrown out by the breath. In the case of mumps it is always carried by the breath. In cases of itch and certain diseases of the skin, eyelids, and scalp, poisonous emanations fall off the body, become part of the dust of the room, and are thus brought within the reach of all.

In addition to these facts, it is undoubtedly true that most of these diseases are apt to appear in so mild a form that they cannot be detected by the usual observer. Mild forms of typhoid and scarlet fever are of frequent occurrence, in which the germs of diseases are as potent as if the patient were dangerously ill. In these cases the germs are spread and affect those that are susceptible as seriously as if the original case had been more malignant. Many cases of diphtheria are unknown to teacher or parents, and do not cause the child to be sick enough to complain. In these cases the sputum of the child, filled with germs of disease, is spread by the breath, by the drinking cup and bucket, and by pencils and slates. More than that, it has been clearly demonstrated that the diphtheritic germ will live and increase in the mouths and throats of persons who are not susceptible. The secretary of the state board of health of Indiana, Dr. J. N. Hurty, instances such a case in a school where a child having diphtheria was removed, and the building thoroly disinfected. After a week's time school was opened, and another case appeared within a few days. This child was removed, and the school again closed and the building disinfected in every way known to science. Again, soon after school opened, another child took diphtheria. Dr. Hurty then called the school together, and prepared cultures from the spittle of all the children and the teacher. The disease germs were found to be in the teacher's throat. Yet she had not had the disease, nor did she have it. The drinking cups, the water bucket, the pencils, slate, or other medium had probably carried the germs from the mouth of the teacher to the children.

Only a month ago, in our city, a girl attending school, who was seated in a room where ninety pupils had their desks and spent more than half their time during the school day, had a malignant case of diphtheria three or four days before the child, the parents, or the teacher knew of it. When the doctor was called, the case had assumed the most dangerous form; yet no other children took the disease. In this school the ventilation is nearly perfect; the building and surroundings are clean and in as perfect hygienic condition as could be desired. The drinking cups and the closets are in every way ideal. No slates are used; no pencils are exchanged.

It is clear to all that, no matter how rigid teachers and school officers may be in excluding from the schools all cases of communicable disease, yet many forms of these diseases will appear in the school unnoticed. The poisonous germs are ever present in the crowded school. All these diseases are simply the result of concerted attacks of developed germ life upon the lives of susceptible persons.

In the light of these facts stands the paramount duty of all school officers and teachers to surround the schools with those conditions that will in the highest degree reduce the danger of contagion.

The first of these conditions is proper ventilation. The poisonous germs of disease are always present, and the highest protection lies in their *dilution and dispersion*. The steady current of air passing thru the room in a proper manner, diluting the poison and carrying it from the room, is the absolute condition of safety. Next to ventilation is cleanliness of the school premises and schoolrooms. In the filth that accumulates on the walls, floors, desks, in the cellars or basements, on the school grounds, many disease germs find a resting place and an opportunity to develop. Floors should be scrubbed; desks, wainscoting, and banisters should be washed and disinfected frequently. This is necessary, because disease germs may be planted upon the desktops and woodwork of the room by infected persons, and, being transferred by the hands of pupils to their mouths, result in disease.

The open water bucket should be condemned, together with the large drinking cups. The dipping into water of cups used by many is liable to introduce spittle into the water supply, and therewith the germs of dangerous diseases. Children should drink from small cups with rounded bottoms, holding about two gills, and the water be drawn from a running stream or from faucets. The stream of water from a large faucet or from a pump will generally fill the small cup and wash the saliva from its edge. In the schools of Richmond we have from twelve to twenty faucets or running streams of water in each building of eight rooms, and use the small cups, believing that we thus avoid the danger of contagion in connection with the drinking.

Slates should be banished from the school on account of their uncleanliness. As the slate is frequently cleaned with the spittle, and as the damp slate readily collects the dust of the room, the danger of transmitting disease in this way is very great.

Pencils should never be collected and redistributed promiscuously, without first being sterilized by boiling or heating, or by a bath in formaldahide gas.

The cellars or basements of school buildings should be dry and the bottoms have cemented floors.

The closets or privies should be clean, and all discharges carried from the premises to the sewer by running water, or should be evaporated and burned in the dry closets. Vaults retaining the discharges are often dangerous.

Every building should have pleasant, clean lavatories, where soap and water are accessible to the children.

The drainage of the grounds and the building should be ample.

The water supply should be pure and wholesome.

All children should be vaccinated.

Filthy and unclean children and children from unclean homes should not be admitted to school.

School authorities should refuse admittance to schools of any person from any household where a contagious disease exists, or of any person who is affected with any evident or apparent communicable disease, or of any person who may recently have been affected with such a disease, until he presents a certificate, signed by a reputable physician, stating that the danger of infection is over, and the certificate is approved and indorsed by the health officer.

In times of dangerous epidemic all schools should be closed.

The above rules are taken, in the main, from those issued by the state board of health of Indiana, and are similar to those issued by boards of health in other states.

In the discussion of the prevention of disease in the schoolroom one can never omit the consideration of the general health and the nourishment of the children. The healthy, vigorous person with natural vitality is rarely susceptible to any contagious disease. Those most susceptible are the weak whose vital resisting powers are reduced by any cause. Among the predisposing causes to disease among children of which the school should take account may be mentioned insufficient clothing and exposure to the cold resulting from poverty in the home, insufficient or improper food, physical exhaustion from over-fatigue, loss of sleep, disorders arising from bad habits in breathing and eating.

Little has yet been done by the school authorities of America in regard to the questions here considered. Yet in many cities they are being scientifically studied, and many experiments are being tried. Physical exercises in schools and gymnasiums are doing much to better the physical condition of children and improve their habits of breathing. What can or should be done in regard to the food of children is a problem for each locality. In hundreds of mothers' clubs thruout the country the subject has been carefully considered. In a few cities the children in the poorer districts have been furnished a healthy lunch before each session of the school. The results of these efforts are in a measure still problematical.

In Richmond, as in other cities, we are insisting that the children be warmly clothed, and, when necessary, using the public funds to bring this about.

In all cities there should be a regularly appointed school physician, paid by the school board, whose duty should be occasionally to inspect the schools, and to examine teachers and pupils in suspected cases of disease. In this way only will it be possible to exclude from school many of the milder forms of contagion. His aid will be absolutely necessary if the attempt is made to exclude from the school cases of tuberculosis. He will be able in many cases to prevent the starting of epidemics.

State boards of health should be given large legislative and executive powers. Their local officers in cities and counties should be given power to enforce their rules in every particular. School officers should be subject to their direction. A board of health with only advisory powers will be of little value to any community. Human nature is everywhere akin. "The child is father to the man." There are few boys who do not resist at home and at school the exactions of authority. They insist on the right to exercise what seems to them to be their personal freedom in all cases where they cannot see that danger is ahead. "The man is but the whiskered boy." He resists the exactions of the law as curtailing his endowed rights. The laws providing for the quarantining of homes or districts where contagion exists, compelling the cleaning of homes of filth, requiring vaccination of children, prohibiting the use of vaults and cesspools, and other similar laws, are always resisted and disobeyed by large numbers of people, unless enforced by officers of the law.

Fifteen million children are in the schools of the United States. The first, if not the highest, duty which confronts the school officers and superintendents is the health of these pupils. The school management, which fails to provide for the physical well-being of the children, at least to protect them from the poisons of contagious disease, must be branded as criminal.

DISCUSSION

SUPERINTENDENT J. H. SNYDER, Tiffin, O.—The purpose of this discussion is not to inquire which are the contagious diseases, or to investigate the nature or character of such diseases. Only competent physicians can do justice to such inquiry. While eminent physicians hold such different opinions in reference to these questions, professional modesty forbids that superintendents of schools, which are carefully guarded against contagious or infectious diseases by legally established boards of health, should engage in the controversy.

It is rather to consider them in relation to the schools; to determine what is the duty of the school officials in reference to their suppression and exclusion. In states where stringent laws exist, and efficient health officers enforce the laws, the duty of the school officer is plain and, in most cases, easily performed. In Ohio the laws require physicians in their practice to report to the health officer every case of a disease of a contagious character. It is the duty of this officer to instruct the principal or teacher of the proper school to exclude therefrom all children coming from the home of the patient reported, and to readmit them on the presentation of a certificate from the same officer. Thus little remains for the school to do more than to look carefully after the sanitary condition of the schoolrooms. By careful enforcement of these regulations, the suppression of most contagious diseases is usually fairly well accomplished. Most difficulty usually arises in their enforcement in cases of the more trifling diseases so common to children. But as serious sequelæ may follow almost all such diseases, a strict enforcement of the quarantine laws should always be required. In case of doubt as to the character of a disease, it is surely best to err on the side of safety. I have intimated that there are times when the duty of the superintendent is not so easy. I had in mind that disease, the announcement of the presence of which, even tho that presence be in an adjoining state, leads to an edict that every child in the schools must be vaccinated.

It may be easy for the superintendent to shift the responsibility to the health authorities, but it may not be so easy to convince those of little faith in the virtue of vaccination that the shifting has taken place. They may incidentally present authentic records to show that in pre-vaccination times the death rate from the dread disease was 18.8 per cent., while at the present time, in the vaccinated and the unvaccinated together, it remains 18.5 per cent. They may refer to the fact that a few of the European states that have had the most stringent laws requiring vaccination and revaccination by overwhelming majorities have repealed them. The enemies of vaccination may ask the superintendent who refuses to admit to the schools their children who have not been vaccinated, to explain the death of almost 2,000 vaccinated children in Montreal at the time of the epidemic there in 1885. They may even question the constitutionality of the law requiring vaccination. But in the end the law-abiding school officer must refer the matter to the health board.

No matter what the decision is in reference to the contagious character of consumption, every superintendent knows that teachers thus afflicted should be excluded from the schools. Nervous conditions which render such teachers unfit for the duties of the schoolroom are too frequently manifested by them in peculiar moods, floods of tears, or flashes of temper. It is claimed by able physicians that the germs of disease exhaled by a consumptive are heavy enough to fall to the floor, without floating about in the atmosphere of the room. If this be true of all such bacteriæ, we may be able to find that the very common practice of oiling the floors of schoolrooms will change from a common fad to a valuable custom. Experience, too short, perhaps, to give much value to the statistics gathered from the records of the schools in our city, has led me to believe that oiled floors have had a perceptible influence in decreasing the amount of absence because of sickness among both teachers and pupils. It seems to me, in view of all the health boards are doing in our cities, that the most important work for school officials is to see to it that abundance of sunlight, properly admitted, be allowed to do its work in cleansing the rooms and in destroying the germs of disease; that rapid change of the air in the room may carry away the impurities resulting from this destructive work of the sun; and, as so many of the contagious diseases originate in conditions of filth, that most stringent regulations, based on the principle that "cleanliness is next to godliness," be enforced in the admission of pupils to the schools.

B. C. GREGORY, superintendent of schools, Trenton, N. J.—It occurred to me, immediately after my invitation to discuss the paper on contagious diseases, that there was really little to add to the main presentation, and certainly nothing to which exception could be taken. There is a collateral phase of the subject, however, on which statistics in my possession throw a little light, which may deserve a passing notice and engage a feeble interest.

I do not take issue in the slightest degree with the demand for greater sanitary precautions against the spread of disease. And I concur with especial heartiness in the increasing demand for medical inspection. Nevertheless, a plea may be made in favor of present conditions, not to prove that they are good enough, but to show that they are not so bad as supposed. If any apology were needed for essaying such a purpose, it might be found in this possibility: that the constant raising of the danger cry may alarm the public to such an extent as to lead to the withdrawal of children from schools. It is necessary, of course, to know how bad affairs are, but it can serve no good purpose to view them as worse than they are.

For a number of years I have collated the absence of teachers and pupils from sickness, and have obtained some statistics of death. Some data which would have been valuable in this discussion I have been unable to put in shape for want of time. I submit, however, certain figures which seem interesting, and offer a few—perhaps crude—inferences.

In the year 1895-96 we had in the city of Trenton a very serious epidemic of diphtheria and measles. On a total enrollment of 8,083 we had thirty deaths, fourteen of which were from diphtheria, four from measles, and two from typhoid fever.

Last year, and also during the year 1894-95, we were free from epidemics. I am thus able to compare an epidemic year with the preceding and the following years.

The numbers of days' absence of pupils from sickness during the three years under consideration were, respectively, 60,009, 92,437, and 58,145. That is to say, the absence during the sickly year was 154 per cent. of the absence of the year preceding, and 160 per cent. of that of the year following. This means an enormous increase of absence, and a great waste of school expenditure. Stating the facts otherwise: In the epidemic year 463 pupils, or over nine classes, were absent the entire year. During each of the two healthy years there were six classes of pupils absent the whole year.

There is a rhythm in the absence of pupils from sickness. January has always been high-water mark, except last year, when the maximum absence occurred in February. The regularity of this rule is rather interesting. If we compare September with January during the three years under consideration, the effect of the epidemic becomes very apparent. To make the comparison we must reduce the totals of absence in each month to a uniform basis of twenty days. Having done this, we find that during the epidemic year the absence in January was 670 per cent. that of September, against 300 and 425 per cent. in the two other years.

Comparing the three Januaries, I find the absence that month during the epidemic year to have been 243 per cent. of that during the same month of the preceding year and 228 per cent. of the following year.

I have gone with perhaps tedious detail into this statistical inquiry, because I want to compare the figures with some others of a different character.

The inferences which seem to lie on the surface of the foregoing data are that contagious diseases impair the health of the school children to an alarming extent, and that the schools communicate contagion with fearful rapidity. These are the inferences usually made, and in my opinion they are utterly at variance with the truth.

For the statistics show that the absence of teachers during the epidemic year was also very great, and that it bore the same relation to the previous year and the following year as was the case with the children; in some cases the state of things was worse. But no teacher died of the contagious disease, and, to my knowledge, not a teacher was sick from diphtheria. In fact, as you well know, that disease does not often affect adults. Now, if the same abnormal degree of absence is perceptible in the epidemic year in the case both of pupils and teachers, it is not logical to assign a reason that does not account equally for both, and the contagion theory meets only one class of cases.

The following, briefly, are the facts: Absence of teachers from sickness during the epidemic year, 194 per cent. and 172 per cent. of the other two years respectively. The figures in the case of pupils were 154 and 160. Relation of month of highest sickness record to September, 1,811 per cent. in the epidemic year, against 336 and 304 in the two other years. Figures in the case of pupils, 670, 300, and 425. Relation of month of greatest absence in epidemic year to same in other years, 184 and 222. Corresponding figures in the case of pupils, 243 and 228.

If the absence of the pupils had been heavy and that of the teachers light, I should have been sure that the contagion had been spread in the schoolrooms, but the teachers' absence was also heavy, and this absence was not due to contagious disease. What cause can be assigned for the abnormal absence of both classes during this year?

One more consideration throws a little light on the subject. I have called attention to the rhythm of absence among the pupils. The rhythm is as evident in the rebound of the pupils' health after January as in the retrogression before January. They recover as quickly as they lose ground, and this is as true in contagious years as in healthy years. The absence in April and May corresponds very closely to that in October and November. That is to say, the closing months of the year are about as healthy as the beginning months; not infrequently they are a little better. I may say, by way of parenthesis, that this fact gives little ground for the supposed exhaustion that pupils suffer during the year.

When you turn to the record of teachers' absences, the figures tell a different story. It is less easy to discover a rhythm in this absence. There is a maximum of absence, however. It occurs, on the average, in March. In 1894–95 it was in April, in 1895–96 in March, in 1896–97 in February. Furthermore, there is little or no rebound. I could give figures, but they would weary you. Suffice it to say that in the epidemic year the absence of teachers in April and May was equal to the total absence in October, November, December, and June. The teachers do not recover their health. There are some serious deductions to be made from the data relating to teachers' absences, but they would not be germane to the present discussion.

The quick rebound in the health of the pupils, contrasted with the failure of teachers to recover, indicates that the cause of absence of both classes should be sought, to a considerable extent, outside of school sanitation. The pupils' record follows the weather, follows the season's changes, and must be due to colds and other complaints consequent on exposure, changes of temperature, insufficient clothing and food, wet feet, and unsanitary homes. The teachers suffer to some extent, but less, from these causes, and also from the steady lowering of vitality that goes on thru the school year; but the data in no way indicate that the school building is a serious factor. It does not follow, of course. that the adoption of additional sanitary precautions would not reduce the sickness record. Of course it would, just as improvement in home sanitation, better clothing, etc., would reduce the record. My contention is that the school is not responsible for the great sins laid to its charge. My opinion is that for many of the children the school is the healthiest place they find during the day.

The absence during the contagion year was very great, but the curve of absence follows the curves of absence of other years. It rises higher, however, from the base line. To account for this we have, in my judgment, to consider only three causes: (1) our sanitary precautions keep out a great many children who live in infected houses, and are not sick at all; (2) parents in epidemic years hasten to withdraw their children on the occurrence of slight colds or other disturbances, which ordinarily would receive scanty consideration; (3) the scare more than anything else depopulates our schools. It is against that scare, and not against proper precautions, that this paper is aimed.

I sincerely believe that our modern schools have very little to do with spreading contagion. We ought not to destroy our school attendance by unnecessary alarms. We divert the attention of the public from other possible channels for conveying contagion, which should be equally considered if the school is to receive so much inspection. I refer to Sunday schools and children's parties, in which sanitation is never thought of. During the epidemic in Trenton the health board concentrated its attention on the schools, but never in a single instance considered the Sunday schools. Children came freely from infected houses to Sunday school, and parents who kept their children from school for fear of diphtheria sent their children to these same Sunday schools to sit by these same children.

I had desired to indicate the bearing of the data on systems of artificial ventilation and dry closets, but time does not permit.

THE INFLUENCE OF MUSIC AND MUSIC STUDY UPON CHARACTER

BY PROFESSOR A. J. GANTVOORT, COLLEGE OF MUSIC, CINCINNATI, O.

Every great reform in education has been inaugurated by the recognition of some new ideal, which had been more or less clearly conceived.

A new curriculum in which some studies received more and others less attention, in accordance with the importance of their supposed bearing upon the attainment of the desired ideal, has always been the natural consequence.

Confucius, Plato, Aristotle, Loyola, Rousseau, Kant, Hegel, Herbart, and many others, including the members of our own now famous Committees of Ten, Twelve, and Fifteen, all have had (and the living ones of course still have) some ideal which they have deemed the most desirable state for man to attain.

All these ideals have had one common tenet — the establishment of the true relationship which should exist between man and the universe. They have all differed only in their conception of that relationship. This relationship between man and the universe around him depends upon the place which he himself occupies in the moral order of things, and is shown by his habitual, everyday conduct toward all things animate and inanimate. This conduct, being the expression of the estimate which he places upon himself and all things in the moral or divine order of economy, is the expression of what we term his character, the expression of what man *is* at heart. We judge a man's character by his conduct, but we also judge what a man's conduct will be under given circumstances by our estimate of his character.

That character is always growing is shown by the gradual alteration in the conduct of children during the process of genuine soul and heart education. Childhood is the most favorable time for character formation, because at that time the character consists only of a number of tendencies or emotions.

These emotions are the springs which move the child to actions. These actions, oft-repeated, form habits. The habits of action acquired during childhood grow into everyday conduct, and this conduct results finally in character for the man that *is* to be.

The direction which this growth of character will take is dependent upon the indulgence on one side, and the restraint on the other side, which the emotions receive in this formative state. The rapidity of the growth will depend upon the environment, that is, the sunshine of approval, the shadows of disapproval, and the food which the emotions receive. The emotions which form the character of the child may be divided into two large classes, according to their natural order of development. The first of these classes consists of the egoistic emotions, in which the importance of self predominates; the second, the altruistic emotions, in which the soul strives to burst the imprisoning bars of self-exaltation, in order that it may expand and be free.

The egoistic emotions — fear, hatred, sullenness, cruelty, despair, antipathy, stubbornness, etc.— are the opposites, the enemies, of the altruistic emotions — courage, love, cheerfulness, kindness, hope, sympathy, docility, etc.

The archenemy of soul expansion, above all these, is fear. When fear is driven out, the soul expands into courage, which is a sense of the soul's triumph over its escape from the prison of self, in which it had lain captive. What is fear but the preponderance of self? What is courage but forgetfulness of self? What is anger or violent temper but the feeling that the self has not been accorded the place which it feels it deserves? What are sullenness, stubbornness, despair, antipathy, and all the egoistic emotions, but assertions of the self? Can music dispel these, can it cast them out, and thus help the soul in escaping from the narrow prison of self? Can music lift the soul out of and above the confines and limitations of self, into a realm of soul expansion and soul activity, where it will have the benefit of the sunshine and air and room necessary to its fullest growth? If so, surely it deserves a place on the annual programs of this and every other body of educators. If so, surely it deserves a permanent and more prominent place in the school curriculum.

If, then, I can show you that music produces such a soul expansion that the base emotions are driven out and supplanted by beautiful, noble emotions, may I not hope that it will receive hereafter greater attention from this association as a body and from its members individually?

May I not hope that the future committees of ten or twelve or fifteen will give much more attention to the subject of music?

There is hardly one in this audience who will deny to music the simple power of recreation. But what is true recreation? Is it not the living of the soul during a short period in a more ideal world, where it is freed from all the material cloggings and hindrances and debasing causes which affect it in everyday life? Anyone who has ever observed the effect of a song, the effect of music, on a child who is temporarily governed by one of those egoistic emotions, must have noticed that when the child took part in the song, or even listened to it actively, those baser feelings, those assertions of the ego, were driven out, and that at the close of the song he had lost his hatred, his sullenness, or whatever egoistic emotion was dominant in him before, and that in its place the opposite emotion had taken possession. He had been lifted out of himself, his soul had temporarily lived in an atmosphere whose air and sunshine were the result of nobler, better emotions; and in breathing that air, in being gladdened and warmed by that sunshine, he had been recreated.

To restrain these egoistic emotions by preventing their outbreaks because of fear of punishment is not sufficient; to cast them out is not sufficient. They must be supplanted by nobler, better emotions; for do we not remember that, when a devil was cast out from a certain man, he was straightway possessed by seven other devils? The restraints placed upon emotions do not destroy the emotions themselves, but only temporarily cover up their manifestations. The emotions are still there. The soul itself must act and throw out the baser emotions, and by its own expansion fill the void just created with a nobler emotion.

The archenemy of soul activity is fear. If music can dissipate fear, it is a strong agent for soul activity. When fear is driven out, the soul expands in courage, which is a sense of the soul's triumph that the prison bars of self which had inclosed it had been burst asunder and the soul had become free. Who has not noticed the boy who, when crossing a dark street or passing a cemetery at night, whistled with all his might? Why does he do this? Who has not noticed the girl who, when she was compelled to go down the dark stairs or into a dark room, quieted her fears by singing, humming, and sometimes even whistling some melody? Why this almost, if not wholly, unconscious musical utterance? Because he or she was alone and felt the need of company, of society, to drive back the assertion, the preponderance of self. They had somehow or other learned, consciously or unconsciously, that musical sound would repress that self-assertion, would open the prison bars which self had placed around the soul, and would give the feeling of company, the whistle or the voice being company. Who has not noticed or read of times of panic in theater or public hall, when some dire accident was threatening, when people were becoming blind with fear, when self and the preservation of that self ruled, when men were likely to trample over women and children, how a strain of music has quieted their fears, or at least helped them in self-restraint, so that order was restored and a panic avoided ? We can all recall such occurrences. Is it not strange that at such times the ear is not closed, but is ready to receive definite impressions ?

Who does not remember the occasion of the Samoan disaster, when the captain of one of the ill-fated vessels caused his band to play during the storm, and thus quieted in a measure the fears of passengers and crew ?

What is the purpose of the band in time of war ? Who does not remember occasions in history where the drummer boy or the fifer rallied the panic-stricken soldiers into a re-formation of the ranks, which ofttimes resulted in a victory ? The word of command at such time was absolutely useless, but the music went straight to the soul and cast out fear. Who does not remember the army of Gustavus Adolphus, in the war for religious liberty ? How the soldiers always knelt upon the battlefield for prayer, and then, starting into the conflict, yea, in the very heat of it, sang that glorious battle-hymn of the Reformation, "Ein' feste Burg ist unser Gott" ? Who does not remember the stories of the martyrs who died at the stake, and how in song they lost all sense of fear and were endowed with a courage which was almost divine ? The song with them led to a soul expansion such as could not be equaled by anything except religious faith. Numerous other cases might be adduced to show that music can supplant all the egoistic emotions, but in proving that it can overcome the most potent of them, fear, it seems hardly necessary to give instances beyond those already given.

Sound is the social agent, and musical sound the soul agent *par excellence.* Pain or sorrow or pleasure, expressed in music, moves us far more than the same emotions expressed in gestures or by the face. Somehow or other we recognize by the tone of voice the genuineness of the emotion far better than by words or by any other expression than that of sound. It is especially so with instrumental music, which does not contain words, but which has absorbed very largely the emotional, the expressive, elements of language. Go and hear the finale of Beethoven's " Eroica Symphony," and listen to the torrent of tumultuous joy which it expresses. Listen, also, to the immortal funeral march from the same symphony, and you will hear such an expression of grief, and

Christian grief at that, as will move any soul into sympathy with that grief.

Music addresses itself directly to the emotions in a language understood only by the emotions. The modern development of music is a response to the need of humanity for an expression of these emotions, those soul feelings, which cannot find utterance in words, and for a medium which will calm those emotions or exalt them far beyond the power of words. Man was endowed with the power to sing, and surely that power was given him so that the soul might expand and lift itself far beyond the confines of the natural world which surrounds it.

Holy Writ contains many examples of how music exalts the soul and lifts it above all earthly surroundings into a purer, more ethereal atmosphere. I will cite but one case: In 2 Kings, chap. 3, we read the account of Elisha's being asked to prophesy. He declines at first, but, when finally prevailed upon, notice what he asks: "Bring me a minstrel, a singer." And the fact is related that during the singing of the minstrel the spirit of God came upon him, so that he was enabled to prophesy. Does that mean nothing to you? Is not that an evidence of God's use of the power of music—to prepare man for the reception of whatsoever is divine, and also of the preparation given by music for the performance of the most supreme acts? Is it not an evidence that thru music's power Elisha was transported far above his surroundings, nearer to heaven and to God? And if it is, dare you as educators in a Christian land, whose education is based upon the precepts of Holy Writ, neglect or omit it in your systems of education, and give the very last and least consideration to an art which bears the very stamp of God's approval? Can you expect to see the children in your charge attain to the ideal which you have, when you neglect or allow to be abused such a power for soul expansion as the art of music?

Music is the most popular of all arts. It can reach and move the unified impersonal soul of a crowd, and move it to noble deeds, and calm even the violent emotions of fear in a crowd. It cannot move to ignoble deeds. Music cannot express ignoble emotions. It can only express those which mankind should treasure. The love of labor, the reverence for duty and analogous emotions, the love of country, the love of nature—all these can be expressed in song. We, therefore, have songs of labor, of plowing, of spinning, of sowing and reaping. Those are emotions which should receive culture, which mankind needs. Songs of that kind exalt labor, exalt duty, exalt patriotism. That is one of the powers which music possesses—that power of exaltation of even the everyday common things of life, which in themselves contain the seeds of desirable emotions. Ignoble emotions cannot be expressed in songs. Who ever heard of a song about making money? Who ever heard of a song in praise of foreclosing mortgages, a song praising theft, or robbery, or cruelty? Those emotions cannot be expressed in song. The joy of making money is a joy which is the result of an egoistic emotion, which glorifies self alone; and so it is with the others. It is the idealizing power of music, the opportunity for soul expansion thru the right kind of emotions, that makes music possess such a beneficent influence upon character formation. Take, for example, the national songs of different countries. Take even our own national song, "America." You may recite it, you may hear it recited, and it will have some influence upon you; but if you hear it sung, every word, every thought becomes intensified, and moves you to action; but if you sing it yourself, when your *own* soul expresses those thoughts, then you begin to realize the full meaning of the words: "My country, 'tis of thee; Sweet land of liberty, Of thee I sing." So much, then, for the effects of music upon the growth of character.

Now, as to the influence of music study. Music study, when rightly conducted in the schools, should have a very strong and favorable influence upon the formation of the right kind of character, but it can only do so when it is based upon the thought that music should enrich the capacity for enjoyment, for soul expansion, which man naturally possesses. It can only do so when the singing of beautiful songs, and the study of the contents of such songs, are the end and aim of music study. But alas, such is not the case in very many instances. The aim of many of those in charge of the musical instruction of the children seems to be the acquirement of a knowledge and understanding of all the different signs in music, rather than the contents of music itself. A great deal of the music instruction tends to the principle of public exhibition of how much the children know about the signs and characters of music, and their interpretation, instead of the enjoyment and the consequent feeling of soul expansion, which is the result of musical instruction if it be well conducted. Many of these instructors seem to be possessed by a haunting fear that, unless the children learn all the characters in which music is expressed, in the very first years of school life, they have failed in their duty. But oh, the mistake of all this! The earliest instruction should awaken a love for music. It should make the child susceptible to the soul expansion which will be so much to him in after-life. He should not be burdened with the numerous signs. These should come slowly, as the desire for knowledge, which comes of a love of the art, is awakened. The music study, which in the earliest years of school life forces upon the child many of the dry husks of music instead of its soul, cannot result in anything like the soul expansion which should be the possession of the child after the first two or three years of school life, and I plead, therefore, for a more rational way of musical instruction, which shall give freer play to the noble emotions which finally should make up the character of the child.

When music study, in our schools, becomes based upon the fact that music is one of the greatest, if not the greatest, of all powers for soul expansion in the whole curriculum, because it lifts the child out of himself, because it etherealizes all earthly things, because it makes the noblest emotions more intense, and casts out the baser emotions, which cannot find expression in song—then music and music study will have a most beneficent influence upon the formation of character.

THE EDUCATIONAL VALUE OF THE TRAGIC AS COMPARED WITH THE COMIC IN LITERATURE AND ART

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It passes for a commonplace observation to say that the proper study of mankind is man. From the version of the Delphic oracle, "Know thyself," down to the sententious maxim in Pope's essay, the dictum has passed with the ready acceptance given to a proverb, or axiom.

The poet Tennyson believed that, if we once thoroly knew "the flower in the crannied wall," we should know all that is and all that God is. If this be so, surely to know all that man is will be to know all that nature is. Indeed, man as an immortal being stands on the highest round of the ladder of nature and connects nature with the divine spirit. He, therefore, contains in himself the explanation of the purpose of the chain of beings rising from the senseless clod thru the plant, and animal, as far as the first stage of human history. But this purpose originates in the divine purpose. Hence human nature is a revelation of the will of the Highest, if we take it in the comprehensive sense suggested by Tennyson's poem.

Doubtless, the knowledge of human nature, once fully reached, will explain the inorganic as well as the organic phases of nature; the external process of causality as well as the internal process of motives and deeds. Then mathematics will be read in the light of psychology; so will geology and botany.

At present, however, we lay more stress on the difference between human nature and material nature than upon their identity. Sometimes, too, we restrict the use of our term "human nature" to the aims and aspirations, the emotions and convictions, of man, and exclude the common, rational elements of his mind, such as we find treated in logic and psychology. In this restricted sense we not only separate the humanities from the nature studies, but we take a special province of the humanities, namely literature and art, and consider only its contents as revealing springs of action.

In the course of study we place on one side all the studies that belong to mathematics, physics, biology, and astronomy, and we add to these the studies of language and history. We then place on the other side the single branch of study known as literature. We speak of the numerous studies in the first group as relating to nature and mind in general, but we contrast all these with literature, and assert that the branch of study set by itself over against that group, namely the gems of poetry and *belles-lettres*, is the one that does more to give us a knowledge of human nature than all the others combined.

Thus, in old age, a man is apt to say of his studies in the elementary school: " What I learned of arithmetic, geography, grammar, and history has been useful to me, but it has not proved to be so thoroly practical as the selections from literature which I read in the school readers. For in them I learned to observe and express the feelings and emotions of the heart. I learned to trace these mere feelings in their growth into convictions and clear ideas. They became principles of policy, and finally inspired and guided the acts and deeds of my life. In conning our reading lesson we learned how a blind instinct becomes an emotion, then a well-reasoned thought; later on a conviction, and then an action, and last of all a habit. We noted all this in the lives of others, and also in ourselves. We came to know human nature in this important respect."

No matter how well equipped we might be as mathematicians or scientific experts of any kind, if we lacked the power of seeing this genesis of actions out of feelings in our fellow-men and in ourselves, our lives would become a chaos of misdirected endeavor. We never could adjust ourselves to our human environment; we should take offense where none was intended, and make collisions with our associates. For we should first misunderstand their motives; next seize on the wrong means of persuasion and conciliation; finally end in misanthropy. With regard to ourselves, we should be equally powerless to control our passions and desires, not knowing whither they tended nor where they were to be repressed.

The narrow life can be lived thru without much knowledge of literature. Intuitive practice in reading the feelings of one's fellows, and in noting their effect on their actions which follow, fit the individual for his narrow sphere. But there is as much difference between the knowledge of human nature that rests entirely on individual observation of the people of one's environment and that founded on an acquaintance with the best literature as there is between an Indian doctor's acquaintance with plants and the lore of a skilled botanist.

Let us make this plain by inquiring into the essential characteristics of the literary mode of portraying human nature.

First we will note that there are two currents, or courses, of feeling and action, that of the particular individual and that of the social whole of the community in which he lives. There may be harmony or there may be discord between these; it depends upon the individual.

When at harmony with the social environment, the individual does not reveal the limits of his individuality nor the all-conquering might of the institutions of society. It is only in the collisions between the individual and the social order in which he exists that the whole of human nature is revealed in both its phases, as individual and as social whole.

Thus we have tragedy and comedy as the two educative forms in which human life is served up for us in literature. For the collision of the individual with the social ideal takes one of two forms.

Comedy shows us the individual arrayed against some settled way of acting or thinking, some ideal of society, and the discomfiture of his plans thru self-contradiction, but without destruction to the individual himself. The social organism in which man lives is of such a character that it converts his negative deeds into self-refuting or self-annihilating deeds. This occasions amusement to his fellows, when they see that he is not seriously injured by his irrational deed. The comic character has mistaken the limits of himself. He has not noticed how the institutions of the social whole reinfore him and render effective his individual deeds, if they are rational ones. To be rational, a man's deeds must not only tend to his own interest, but to the interest of the family, the civil community, the nation of which he is a part. His smaller self must reinforce his greater self, or else his greater self will reduce his efforts to zero.

But this comic side needs further discrimination from the tragic.

Tragedy arises from a serious attack on the social whole and the recoil of the deed on the doer, so that he perishes thru the return of his deed. This is not all. There must be the justification of the individual's deed by the adoption of a principle from a social order different from that of the social whole which crushes him. He must act in the name of a greater self, or else his action will not be dignified enough to be called a tragedy. The death of the bandit Karl Moor, in Schiller's *Robbers*, is a tragedy because it is not mere personal gain, mere selfish interest, that causes the collision, but a revolt caused by a tyrannous social whole whose rulers have done real or imagined injustice. We do not respect the mere thief, or the mere highwayman. But we respect the patriotic remnant who struggle against a usurping social whole, even tho we may feel satisfaction in their defeat by a more reasonable world-order. The Children of the Mist are described by Walter Scott, in the *Legend of Montrose* and in the *Heart of Mid Lothian*, as the remnant of a once powerful people among the western highlands of Scotland, never tamed by their many defeats at the hand of the encroaching Anglo-Saxons who had obtained the rich and fertile lowlands. They fiercely defended themselves to the last, like the famous chieftain Kocheeis of the Indian tribe (Apaches) in Arizona a few years ago. We respect the Children of the Mist, but we feel the necessity of their subjugation by a more rational civilization. But we do not respect the burglars that hide in the slums of our great cities. The tragic character makes a collision with his social order in the name of another social order, it may be of a less advanced world-order or of a more advanced one. Antigone defies the law of the king and offends against the state. But she obeys an older world-order which requires the burial of a dead relative by the living member of the family. This collision is made stronger by the art of Sophocles. He interests in the noble unselfishness of Antigone, while he casts suspicion of selfish ambition on the character of Creon, the king.

So, too, we are excited to pity and terror by the events which bring Œdipus into dreadful crimes thru ignorance. He, too, attacks the existing world-order by a newer one.

There is the tragedy of the life of Socrates, also, who holds up a new world-order to the Athenians, the first teacher in the world of the right of private conscience as against the established church of his time. Before Socrates there was no individual moral right—everyone was expected to obey implicitly the social custom without questioning it. This tragedy, however, is called by Hegel the tragedy of Athens, rather than of Socrates. He drank the hemlock, it is true, but it was a triumphant death, for his was the entire future of the world history. Since his time there has been unceasing growth of the right of individual conscience among nations.

The tragic, we repeat, must have this collision of the individual against the social whole in which he lives, but he must be backed by the principle of another social whole, either a perishing world-principle or one of the future just beginning its career.

A mere attack against the state from motives purely selfish is criminal, but not tragic.

The commission of crimes, and the capture, conviction, and punishment of the criminal, make a story that interests us. But if we do not discover a moral principle in the mind of the criminal, we are liable to injury in dwelling on the details of the story. The *Police Gazette* is justly excluded from the family, because it educates toward crime rather than away from it. The story of *Jack Shepard*, as told by Ainsworth, and the other stories of like character, idealize the mere selfish revolt against the civil order. They are written from the standpoint of mere selfish individualism. The individualism that Socrates initiated was that of a moral individualism. Spend your life in the inquiry for what is right, and do not refuse the hemlock if it is your reward for preaching the right.

The death of Socrates was the tragedy of Athens. But the death on Calvary was the world-tragedy. But the world learned and learns its deepest lesson from that tragedy: not merely the right of individual conscience is taught by that, but the worship of sorrow, the sacrifice of the self as mere selfishness for the emancipation of other selves, the principle of divine charity, the missionary spirit.

Tragedy reveals the depths of human nature, while crime does not, because it shows us the struggle between two social ideals, an older and a newer, an earlier and a later. These are revealed in their fullness in the struggle.

As tragedy demands that the tragic character must be the bearer of a diverse principle of social order, so, too, does comedy require something more than mere capricious difference from prevailing custom, and something more than mere self-seeking at the expense of the social whole.

Spanish Cervantes has depicted for us the attempts of Don Quixote at resuscitating knight errantry. Knight errantry had been, a few centuries before, a very serious affair for all Europe. Chivalry was an essential epoch in the history of Europe, and there is no epoch in the evolution of modern civilization more important than it. For it was the desertion of the classic ideal for the Christian ideal—it was the celebration of this abandonment of the old ideal and the adoption of the new. The ideas of love, honor, and fidelity were consciously set up as the expression of the new freedom that dawned on the mind of Europe as a result of the world-view of Christianity. Each soul has an infinite destiny beyond the grave. All that is secular is secondary to this religious principle. There were three crusades made as a result of this new consciousness: First, the conquest of the land containing the holy sepulcher—this was the outward crusade against Islam. Secondly, the inner crusade, the refutation of the Arabian interpretation or Aristotelian philosophy by the great thinkers, marshaled by such scholars as Alexander of Hales, Albertus Magnus, and Thomas of Aquino—this was the scholastic crusade. After these outer and inner crusades came, a little later, the discovery of America, the third crusade; against the darkness of outlying heathenism, Queen Isabella contributed her jewels to fit out the fleet of Columbus in the name of the holy church.

Knight errantry was a passing phase of one of the most serious of spiritual movements. And when we laugh at Don Quixote's adventures, we do not laugh at him as a madman or lunatic, but at the ineptness of the old-world form seriously set up in the midst of a comparatively modern world. Its mediations seem absurd when deprived of the principle of chivalry and its social order on which they had been established.

Just so in Walter Scott's story of *Woodstock*, and especially in that of *Old Mortality*, the excesses of Protestant individualism, both of Independents and Presbyterians, are found in comic situations, because brought against a more advanced or matured theologic view. They furnish comic and not tragic situations, because they do not involve the characters portrayed in destruction for their views, but only in futile acts and endeavors, endless self-contradictions.

Aristophanes ridicules, not the older world-views striving for re-establishment in his time, so much as the products of the new movements put forward by the Sophists and the freethinkers of that time. He took Socrates as his type and model of a Sophist. He ridiculed anything and everything that was offered as a substitute for the old customs, the Greek morality that had come down from the good old times. Nothing could stand up against the inextinguishable laughter kindled in the *Clouds*, the *Wasps*, the *Frogs*, and his other comedies. The bad went down altogether, and the good went down temporarily, in the person of Socrates. But Aristophanes did not save Athens from "the newness," after all. Alexander the Great, the pupil of Aristotle, the pupil of Plato, the pupil of Socrates, had to save Athens from the good old times incarnated in Spartan conservatism. The great, grand pupil of Socrates in the person of Alexander marshaled Grecian youth to war on Persia, and his conquests extended to India and Bactria, and Greek kingdoms took the place of Persian satrapies. We see how serious were the elements entering the most comic of all comedies, those of Aristophanes. He had serious intentions, but he did not show the deeds of the individual returning upon him to destroy him. His dramas showed only the futility of plan and purpose undermined by inherent self-contradiction.

We have in later comic writers, say Swift and Sterne, the production of comic situations by means of importing one nation's customs into another nation. Seen thru the eyes of one land or native country, the daily habits of another land or country seem absurd. The French word *outré* expresses it. Swift is an Englishman who goes to Ireland and acquires a habit of looking critically on the ordinary manners and customs about him. He does not ridicule the Irish, however, but his own countrymen, the English, and writes the voyages to Lilliput and Brobdingnag, everywhere showing up the inconsistencies and absurdities in the social and political life of England in the first part of the eighteenth century.

Sterne shows French and Belgian life thru English spectacles.

Our own Mark Twain shows us borderland life thru the eyes of the urban life of the Atlantic slope; and in turn he makes his most comic situations by showing us the borderland traveler, with his local prejudices and ignorance of the history of culture, making his journey thru the museums and art galleries of Europe.

But in all these examples we have one serious national order against another, the French against the English, or the American against the European, or the earnest pioneer life against the life of culture.

A definition of comic and tragic situations may be made as follows, using the distinctions of content and form: content standing first for the temporary, or transient, the local or individual interest, the less substantial side. When it is placed under the form of the permanent, the ethical or universal or substantial interest, it is seen at once as ridiculous. The form is a world too large for the shrunken importance of the content to fill. The special interest is given the dignity of the general interest, the local and provincial puts on the airs of the world-culture, and we cannot help but laugh at it. We have within us the psychologic reaction of making up our minds for a serious and universal interest, and then suddenly encountering the local and insignificant. We collapse with laughter—for laughter is the physical counterpart to the inner collapse of our ideas descending from the great to the small.

On the other hand, the content may be a serious matter—a collision of world-ideas. The person bearing the new or old ideal, and with all seriousness setting it up against the established usage, proposes a new content for which the existing form has no place. It would shiver that old form to admit it. The established form must destroy it and its bearer. We may act against the new content and kill the messenger that brings it, but we do it in pity and terror, for it is a tragedy. The new substance is too ample for the old form. The new idea and its bearer cannot yet be tolerated. His time is yet to come. It must be a tragedy under the present circumstances.

We take courage, however, in this thought, that new forms are on their way which will permit, without danger to the social whole, a greater freedom in the adoption and promulgation of new or old ideas. There will come a larger tolerance and fewer tragedies.

In concluding our survey of the tragic and comic, we may ask ourselves whether they belong to the sublime or the beautiful, one or both.

We are disposed to call the tragic the sublime and to see in the comic its opposite, which is said to be the ridiculous. So the opposite of the beautiful is the ugly. Certainly the comic or ridiculous contains the elements of ugliness, but in contrast with what? Certainly not with the sublime. It is the irrational overcome by the rational. But the beautiful is defined as the spectacle of the rational overcoming the irrational. It is a presentation, not to the reason or the intellect primarily, but to the senses. To the senses primarily, and only secondarily to the intellect or reason. Nevertheless, both activities, the sense and the reason, must participate in the perception of the beautiful. To the reason alone the beautiful becomes simply the true. "The beautiful is the splendor of the truth," said Plato—it is the glory of the truth seen by the senses. Just so the truth presented to us thru the will is the ethical, or rather the good. As the reason must be present and co-operate with the senses in the perception of the beautiful, so the reason must be present and co-operate with the will in the good.

The beautiful certainly includes the works of art in which the tragic and the comic, one or both, are presented. The sublime, therefore, may be considered as falling under the concept beautiful, if it is to be applied to tragedy. But it is better to make the sublime a separate idea co-ordinate with the beautiful, and not containing or contained.

The sublime is properly applied to that whose content and form are not commensurate or in harmony with each other. The Old Testament descriptions of God's power often make nature so inadequate that it is seen to be no adequate revelation of God's omnipotence. The result is an idea of sublimity, but not of beauty. The vast things of the earth, its mountains and seas, the sky and the rocky foundations of the earth, these, together with the sun, moon, and stars, are such inadequate manifestations of Jehovah that we conceive sublimity rather than beauty. The beautiful is an adequate manifestation, something in harmony with that which is manifested in it. The sublime reveals the spiritual as not revealable—that which is to manifest the spiritual is made very distinctly to manifest its incapacity to manifest—hence, we have an æsthetic contradiction, art refuting itself.

We now see, or may see, the educative function of the tragic and comic. For all art must treat as its best subjects the tragic or the comic phases of human nature. In each of these it makes us conscious of the eternal elements of human nature—the divine-human in some contrast with the finite and transitory.

In no way can the individual learn to know the practical problems of human nature so effectually as thru art and literature. He learns to see how the deeds return upon the doer to bless him or to curse him. The individual learns to know his greater self, the social.

The world-view of a people gets its utterance in the national poets, and hence the great works of art, such as have been furnished by Homer, Æschylus, Sophocles, and Aristophanes for the Greeks; by Virgil and Dante for Italy, Molière and Cervantes for France and Spain, by Shakespeare for England, and Goethe for Germany, contain a vicarious experience. The types of character presented give the people their apperceptive material under which to classify the people they meet with in their lives and the deeds which they see performed.

We learn best the lesson of the deed which we see others perform. Without making the experience ourselves, we profit by seeing others make it. The experience of the poet thus becomes our own vicariously. Human nature recoils against direct advice and does not like to have personal applications made. But, as Aristotle said, the spectacle of the drama purifies the beholder. The lesson is more impressive and wholesome because it is accepted by us in our freedom and not imposed upon us by external authority.

VACATION SCHOOLS

BY RICHARD WATERMAN, JR., CHICAGO, ILL.

The vacation school is no longer an experiment. In New York, Boston, Chicago, and other large cities, it is recognized as one of the strongest forces for good in the summer life of the crowded districts. What, then, is a vacation school? The term as used in this paper means a free school which children between the ages of four and fourteen may attend during the summer months. Wherever such schools have been established, they have come to be recognized as a valuable ally to the regular public schools, and in many cities, notably New York and Chicago, there is a growing public opinion in favor of making them a part of the public-school system. Thus far, however, the vacation schools established have been supported, in nearly every instance, by private contributions. The school authorities have granted the use of the necessary buildings and equipment needed for manual training, but the salaries of the teachers and the cost of the materials used have been paid from special funds provided for the purpose.

The one exception to this statement is Newark, N. J., where the board of education established vacation schools as a part of the school system in 1886, and since that time has carried on the work each summer.

In advocating the establishment of vacation schools, the friends of the movement reason in this way: In a great city the children should not be excluded from the schools during one-fourth of the entire year. In Chicago, for example, there are 225,000 children in the public schools. Why should all of them be turned out of the school buildings in the latter part of June and kept out until the first week in September? Some of them can leave the city during the summer months, but the greater number must stay at home. In the poor and crowded districts, home is not an attractive place thru July and August. Therefore the children swarm into the streets and come into contact with all sorts of demoralizing influences. Is it not poor economy for the city to spend millions of dollars of public money in the erection of buildings for the use of the children and then to allow these buildings to remain unused for months, while the children are running the streets, forming bad habits, and losing a great part of that which they have gained in the public schools during the previous year? Can cities afford to have their children go backward during the summer months, when they might be going forward? Is it right that children who must leave school at a very early age should be deprived of an opportunity that could so easily be offered to them?

There are many people who believe that not only the children in crowded city districts, but also children in the wealthier parts of large cities and in small cities, and even in country districts, ought to have the opportunity to attend vacation schools, where their activities could find an outlet along healthful, profitable lines. In support of this view they quote the plan followed by the children at Chautauqua, where each day, under intelligent direction, they study nature in the woods and fields and on the shores of the lake, under conditions that make it pleasant as well as profitable. This phase of the summer-school movement is, however, outside of the field of the present discussion. It seems desirable to consider here only those schools which have been conducted in large cities for the benefit of children of elementary-school age who would otherwise be on the streets, in the midst of those demoralizing influences which are especially strong during the summer months, or in crowded tenement houses.

The pioneer in the vacation-school movement was Newark. In 1886 the work in that city was started on a small scale, and it has grown steadily, until in 1897 there were nine schools, employing seventy-three teachers and having an average daily attendance of over two thousand pupils. They are all primary schools, having one session daily for six weeks and basing the work very largely upon nature study.

Boston soon followed by establishing vacation schools similar to those in Newark, but under private auspices. Since that time philanthropic people in Boston have contributed the funds needed each year to support vacation schools and playgrounds, where the children could find amusement and recreation, as well as helpful teaching in various industrial and artistic branches. The industrial work is not confined to mere technical training, but includes a careful study of the materials used by the pupils in their sewing, basket-weaving, leather work, cabinet-making, and other occupations.

In 1893 the New York Society for Improving the Condition of the Poor conducted three vacation schools in New York city. The board of education provided the buildings and equipment, and the society paid the salaries of the teachers and bought the materials used. By 1897 the number of schools had increased to ten, and there was an average daily attendance of over six thousand pupils. The subjects taught included drawing and modeling, sewing, woodwork, and printing, nature study and map-drawing, music, dancing, and military drill, language, commercial bookkeeping, and various plans for self-government and training for citizenship. Nearly all of the teaching was carried on without the use of books.

In 1896 the Civic Federation of Chicago conducted a vacation school in one of the most crowded foreign districts on the west side of that city. The board of education gave the use of a fine public-school building, in which there was a very complete equipment for teaching woodwork. The Chicago *Record* gave the entire school an excursion to the country once each week. The work of the school was grouped around this excursion as a center. The subjects taught were nature study, woodwork, sewing, music, gymnastics, drawing, and modeling. Only 300 children could be admitted to the school, and nearly four thousand had to be turned away for lack of room.

In 1897 a vacation school was conducted in the heart of the Stock Yards district of Chicago, under the auspices of the University of Chicago Settlement. Here again the enrollment was limited to 300, but the number of applications was far in excess of the accommodations. The subjects taught were woodwork, sewing, housework, nature study, drawing, music, and physical exercises, and a very practical form of training for citizenship was given thru the penny savings bank and the Clean City League. Frequent excursions to the country were made a prominent feature of the work.

These two schools in Chicago have aroused so much interest in the vacation-school movement that a number of public-spirited women have agreed to provide the money needed for the support of several schools during the coming summer. The school authorities take a great interest in the work. At the end of the first summer the president of the board of education recommended in his annual report that vacation schools be made a part of the public-school system. This recommendation has not yet been acted upon, because of certain defects in the Illinois school law, but as soon as these are corrected a strong effort will be made to place these schools under the direction of the board.

Among the other places where vacation schools have been established are Cleveland, Brooklyn, Indianapolis, and many smaller cities. The plan followed in each of these cities was similar to that described above.

If we examine carefully the work which has been done in the large cities named, we find that there is a marked difference in the several plans followed. In Newark the schools have been carried on only in the primary grades, and the work has been based largely upon nature study. In New York the subjects taught have included a considerable number of industrial occupations, and the chief aims have been, first to interest the children to attend such a school, and then to develop some technical skill which would give their work an industrial value. Children of both primary and grammar-school age have been admitted. In Boston the motive has been largely philanthropic, and there has been no concerted effort to make the schools a part of the city system. The main object seems to have been to keep a few children off the streets during the summer and to keep them interested.

In Chicago the chief aim has been neither industrial nor philanthropic, but educational. The teachers have tried to gather in as many children as possible, between the ages of four and fourteen, and, while using the freest methods, to make a systematic effort to develop them on all sides. They have made a careful study of the children enrolled, and have tried to help them at the point where help was really needed. Many of the pupils did not know the common animals by sight, had never seen Lake Michigan, and had never picked a flower in a field. They were taken to the lakeshore or to the country every week, were encouraged to observe and ask questions, and were allowed to gather materials that could be studied afterward in the schoolroom.

Many of them were foreigners and knew almost nothing about the city and the country in which they lived. So they were given instruction in civics and were encouraged to perform some of the duties that devolve upon every good citizen. The boys were eager to "make things." They were taken into the shop and taught how to use the woodworking tools, how to read a drawing, and how to use their hands.

Many of the girls came from homes which were not comfortable and were not attractive. Every day they were taken into a class-room divided by screens into several smaller rooms, each of which was furnished with the things needed for teaching the care of some room in the home — the bed room, the dining room, the living room, or the kitchen. They were taught how to care for the home and how to make it attractive, and some of them learned for the first time in their lives that in housekeeping there is something besides mere drudgery.

Some of the children had a passion for color, but had never before had an opportunity to use chalks or water colors. In the vacation school they found this opportunity, and they made the most of it. Their teachers were delighted with the results, and many children, supposed to be almost hopeless in the regular schools, produced really strong drawings in the vacation school.

Nearly all of the children showed an interest in music, and, after spending an hour every day for six weeks in the singing classes, the school, as a whole, was able to do good chorus work.

In planning the work done along each of these lines, the interests of the children were studied very carefully, and each day the methods used, as well as the materials presented, were chosen in direct reference to the interests and the needs of the pupils.

If the vacation-school movement can be developed along educational lines rather than along those which are industrial or philanthropic, it will come to be recognized as an effort to do something more important than increasing the industrial skill of a few communities, or attempting to help a few poor children here and there to have a good time in the summer. It will be recognized as a movement intended to develop in our cities a social institution that has become a necessity. In the early part of this century only 8 per cent. of the population of this country lived in cities. Today nearly 35 per cent. live in cities. At that time foreign immigration did not threaten to fill our country with people whose education was defective, whose traditions were different from our own, who had very little in common with American citizens. Today immigration brings thousands of such people to our shores, and a large proportion of them settle in cities. They form communities in which one could walk for blocks without hearing a single word of English. Can we afford to neglect any opportunity for bringing these people into touch with all that is strong in American civilization?

In seeking for an answer to this question, the vacation schools which have been conducted in Chicago have had some very definite results: (1) they have exerted a marked influence on the social conditions in the communities where they were established; (2) they have had a helpful influence on the work of the Chicago public schools; (3) they have helped to create a strong public opinion in favor of some of the newer ideas in education.

Since the results achieved in the two Chicago schools were very similar, strong illustrations might be taken from the report of either of the schools. For the sake of unity, however, the illustrations given here will be drawn entirely from the report of the Seward Vacation School, conducted in the Stock Yards district during the summer of 1897.

First, the influence on social conditions in the neighborhood of the school. The Seward school building is located in a neighborhood where, altho Germans and Poles, Jews and Bohemians, Italians, Scandinavians, and Irish live side by side, they are not always on the best terms with one another. When the teachers in the vacation school tried to find a starting point for their effort to train the children to be good citizens, they discovered that there was no feeling of brotherhood between the several races. In many cases the relation between families, or between the various groups of families, was, at best, an armed neutrality. So the teachers said: "Let us first prepare a statement of what we believe is the true idea of the duty of every citizen, and let us form some organization that will realize this idea among the children, if possible." The idea was expressed by Miss McDowell in what she called a "civic creed." Every morning all of the teachers and the pupils gathered in the school hall for opening exercises. They sang a patriotic hymn, saluted the American flag, and then repeated the civic creed, as follows:

"God hath made of one blood all nations of men, and we are his children, brothers and sisters all. We are citizens of these United States, and we believe our flag stands for self-sacrifice for the good of all the people. We want, therefore, to be true citizens of our great city, and we will show our love for her by our works.

"Chicago does not ask us to die for her welfare; she asks us to live for her, and so to live and so to act that her government may be pure, her officers honest, and every corner of her territory a place fit to grow the best men and women who shall rule over her."

The children learned to feel that the sentiment expressed in the patriotic hymn, and in the creed, should find some practical realization, and that no citizen is really loyal who does not "show his love by his works."

So they organized a "clean city league." All of the older children, both boys and girls, belonged to the league, and all pledged themselves to do their part in trying to keep the school premises and the neighborhood clean and free from litter of all kinds, (1) by not throwing down papers and refuse that would make it dirty, and (2) by helping the city to see that it was systematically cleaned.

One teacher gave her entire time to the work of the Clean City League. On the first day she talked with the children about the condition of the neighborhood, and asked them if they were satisfied with the appearance of the streets and alleys, and yards and garbage boxes. At first they seemed to be perfectly satisfied, but soon they learned to observe more carefully, and they reported a great many things that were not as they should be — sidewalks broken, streets dirty, alleys filled with refuse, etc. The teacher gave them systematic instruction, based on the city ordinances providing that the city shall be cleaned by contractors who are employed by the city authorities and paid with money contributed by the taxpayers. She also explained that, if a contractor fails to do his work, it is the duty of every good citizen to report the failure to the city authorities; that, if a contractor accepts the money and neglects the work, he is cheating the taxpayers. As soon as the boys in the neighborhood were convinced that the people were really being cheated, they became very eager to stop the cheating at once. Some of them made twenty-five or thirty complaints a day of violations of the ordinances. They watched the work of the contractor in that ward so closely, and made such prompt reports of his shortcomings, that he could not shirk, and before the end of the summer there was a great change in the appearance of the neighborhood. Streets were swept, alleys cleaned, garbage boxes emptied, and sidewalks mended, where all had been neglected for months at a time before the league began its work. The children and their parents realized for the first time that they had a right to go directly to the city hall and demand that their neighborhood be cleaned. They learned that every citizen has rights that must be respected by the city authorities, if the citizen demands it.

The children also learned that there is a close relation between the cleanliness of the city and the health of its citizens. In the league they dealt with some of the conditions which affect public health, and in the housework department with some of the home conditions which affect the health of individuals and families. Every child was taught the value of personal cleanliness, and the school maintained three showers and a tub all summer, and found good use for them.

The penny savings bank was also an influence for good in the community. The children were helped to form habits of thrift and economy, and encouraged to save their pennies instead of spending them for immediate personal indulgences. Since the vacation school closed, the bank has been maintained by the settlement, and each week many of the children who were in school go to the settlement and make their small deposits.

The school also exerted an important influence on the home life of the community thru the teaching of housework. The girls practiced in their homes what they learned in the school. It was very encouraging to the teachers to feel that they were influencing the life of the neighborhood in the very place where their influence would be the most helpful — i. e., in the home. So much for the results in the community.

The second definite result mentioned above was the influence on the regular work of the public schools. This was exerted in a number of different ways:

(1) The public-school teachers who visited the vacation school were helped to gain a clear idea of what may be accomplished by the study of nature in a school where it is taught with illustrative material instead of thru the medium of books.

(2) They were able to observe the effects of school excursions in which the pupils gained new experiences, gathered fresh materials to be studied in the class-room, drew directly from nature, and learned to observe carefully and to record the results of their observations.

(3) They were given a practical illustration of the educational value of bench work in wood in every school year from the kindergarten to the high school. In the Chicago public schools manual training has not yet been made an organic part of the curriculum. It is true that seven thousand boys in the sixth, seventh, and eighth grades of the public schools spend an hour and a half each week working with tools, but the manual training has not been developed on the basis of a sound psychology, nor has it been brought into close relations with the other subjects in the curriculum, and it has been confined entirely to the upper grades.

The vacation school gave a practical demonstration of some of the educational aspects of manual training: its value in teaching number to the first-grade children; its value in the study of form and developing a sense of proportion and skill in measurement; its value in forming good habits of thought and of action. Many teachers realized for the first time that manual training really means mental and moral development, and that, instead of being an isolated special subject, it is a method that may be applied in every grade of school work.

The work done with boys who were not interested in study had some very marked results. The regular teachers in the Seward school say that some of the boys who had been especially troublesome during the previous year are now showing a real desire to do good work. This seems to indicate that the vacation school, by developing the children on all sides, aroused in them a keener interest in their regular school duties and an ability to perform these duties better than would otherwise have been possible.

It is, therefore, safe to say that the vacation schools have exerted a very helpful influence on the regular public-school work. They have helped pupils who were hard to reach by the usual methods; they have helped teachers who wish to come into touch with new ideas in education; they have helped school authorities who were glad to see an educational experiment station testing some of the newer plans for school work.

The third definite result mentioned above was that they helped to create a strong public sentiment in favor of some of the newer ideas in education.

This result was largely due to the way in which the daily papers supported the movement and described in their columns the work that was being done. It was also due, in part, to the favorable impression made on people who visited the school. Nearly every visitor felt that, when the pupils in a school are so deeply interested in what they are doing that they pay no attention to the people who are coming and going all the time, and when the teachers in that school can give their time entirely to teaching, instead of largely to discipline, there is something in the work of this school that is worthy of careful study with a view to more general adoption.

The following are a few of the conclusions reached after making such a study. They merely serve to emphasize the fact that the organizers of a vacation school, however free in defining their methods and in outlining their curriculum, must recognize the same principles of psychology and the same laws of individual and social growth that should be recognized in planning the work of every school:

1. That interest is at the foundation of good discipline and good work in school.

2. That in dealing with troublesome boys manual training may be made a very important factor.

3. That the success of any school depends less on the use of books and a fine building and a complete and expensive equipment than on the skill and interest and enthusiasm of a strong teacher.

4. That housework may be so taught in a school as to be truly educational, and at the same time to exert a very helpful influence on the home life and social conditions in the neighborhood.

5. That the study of the laws of public health and of private hygiene, and the direct application of this study in the affairs of everyday life, can and should be made a part of the education of every child.

6. That in the study of the world in which we live (usually grouped under the heads, "geography" and "nature study") far more can be accomplished by intelligent observation of nature herself than by trying to study her thru printed descriptions.

7. That the work in civics and the training for citizenship may be so planned as to be a living force in a school, and not merely an intellectual exercise in the principles of popular government.

8. That music is one of the most essential elements in the course of study — not the music which confines children to the reading of notes and the singing of exercises and scales; but the music that gives them an opportunity for the free expression in song of the feelings, desires, and aspirations which represent the highest and truest part of their natures.

9, That manual training, carefully planned, may be made the strongest educational factor in the work of a school, i. e., the element in the school curriculum which is most important in training the minds of both boys and girls and in developing their characters. The manual training that appears to be most successful with boys of the elementary-school age is bench work in wood. The manual training that has produced the best results with the girls (especially those of grammar-school age) is housework and cooking. Both forms may very profitably be made a part of the work done in a vacation school, if the equipment can be obtained.

In outlining the plans for a system of vacation schools, the next question to be answered is: Should they have a well-defined curriculum, and, if so, what should this curriculum include? It may be well to mention first some of the elements the curriculum should not include. It should not cover the same ground as the regular course of study in the public schools, since it is not the function of the vacation school to educate the bright child beyond his grade, nor to bring the backward child up to his grade. It should not provide for a purely industrial training, since the vacation school is neither a professional nor a trade school. It should not cater to the whims of the children, since whatever is put into the curriculum will interest them, in any event, if wisely planned, and they are really unable to choose for themselves that which be best for their development. In planning the curriculum the organizers of a vacation school should take into consideration:

1. The special aim which they desire to accomplish. This will depend in each case on the character of the community and on a number of purely local conditions.
2. The possibility of using museums, parks, and excursions to the country as aids in the work of the school; and
3. The feasibility of providing equipment enough to give every child some form of manual training every day.

The subjects to be taught can then be chosen with reference to these conditions.

If possible, every child should have manual training, nature study, drawing, music, physical exercises, and some form of training for citizenship each day, and an excursion to the country or to some other place of interest every week.

The teachers should be chosen with great care, and paid enough to make it possible for them to do this work in place of part of the work of the regular school year. The buildings and equipment should be provided by the board of education, and the schools should be supported by the board.

These recommendations are based directly upon the experience already gained in several of our large cities. In each of them the movement is growing steadily, and in each the vacation school, as we find it today, seems destined to become an important part of the public-school system in the near future.

CONTINUOUS SESSIONS, WITH SPECIAL APPLICATION TO NORMAL SCHOOLS

BY IRWIN SHEPARD, PRESIDENT STATE NORMAL SCHOOL, WINONA, MINN.

The public-school system of the United States, in its organization, subjects of study, methods of teaching, and discipline, embodies the relics of many customs and conditions which have ceased to exist. The extent and force of these traditional elements appear in such features as the continuance of the district as the unit of school organization; the limitation of the school term to little more than half the year; the general closing of schools for the long summer vacation, and the persistence of the three R's as the essentials of an elementary training.

The conservative force in our national system of education is the strength of tradition. This conservatism often binds the teachers more strongly than the people, for it frequently happens that the former have progressed more slowly than the latter, and have yielded tardily to the advanced demands of public opinion.

The traditional close classification of the graded schools, with its rigid system of annual promotions, altho long since condemned by public sentiment, still quite generally prevails; or at most has yielded only to the extent of substituting biennial for annual promotions.

The method of determining qualification for promotion by written examinations alone was generally retained long after the people distrusted its efficiency and even demanded its discontinuance.

The three months' annual vacation season has come to be regarded by most teachers as a necessity as well as an inalienable right, and any disposition to lengthen the school year is generally looked upon as an unjustifiable encroachment upon this right.

It requires some courage to suggest, even in a convention of progressive superintendents, that other seasons than summer time may be equally profitable for vacation purposes, and that the intellectual work of the schoolroom may be as well done in summer as the intellectual work of other callings.

The average school year for the United States is about seven months. In many places, especially cities, it has been extended to ten months in answer to popular demands. It is not entirely clear why the extension should stop here. In fact, very good reasons can be given why the schools should be open as continuously as the factory, the workshop, and the store.

If it is replied that pupils and teachers need two or three months annually for rest and recuperation from the intense strain and pressure of the year's work, it may be questioned if a system which produces strain and pressure so near to the point of exhaustion is not unwise and indefensible, and if a distribution of the same work over a longer period would not be wiser, tho it involved longer, or even continuous, sessions. It is certain that the point of efficient work on the part of both teacher and pupil is passed long before signs of strain, over-pressure, or exhaustion appear.

The annual vacation itself, deemed so essential for rest, contributes in no slight degree to the burdens of the already overtaxed year which follows, by the necessity for recovering the loss incident to the breaking down of intellectual habits and the waste of acquired knowledge during the long vacation, even if no more serious results appear.

There may be certain valuable compensations for the long school vacation, when the pupil can turn to some helpful occupation, as may usually be done in rural communities; but this is seldom the case in cities, or even small towns; therefore the question of continuous sessions *versus* short school years and long vacations belongs rather to the graded than to the rural schools.

The profitable employment of the time of children of school age during the long summer vacations is often the most serious and perplexing problem that confronts parents living in cities and towns, even under the most favorable circumstances; while in the case of children living in crowded districts of large cities, or in the saloon-cursed village, it becomes a question of vital importance to society as well as to the family.

It is not difficult to conceive of such an adjustment of school work, rest, and recreative occupations that continuous attendance upon school may not only be free from overwork or strain, but may furnish the most healthful and enjoyable life that a child can live; especially if vacations *may* be taken, without prejudice to progress, whenever needed or whenever the time could be otherwise more profitably spent. The ideal school life is that of the most healthful living, and does not admit the necessity for recuperation from overtaxing or unhealthful requirements.

However, the plan of continuous sessions does not necessarily involve continuous attendance on the part of the pupils or continuous service by the teachers. It means, rather, continuous opportunities to the pupil for attendance on regular school sessions, and relief to the teachers from enforced vacations, always annual and always at the same season.

In view of the growing demands for vacation schools, especially in large cities, it is important to determine whether these schools shall be preventive and sporadic, without organic connection with the school system; or shall be constructive, progressive, and so adjusted as to contribute to advancement in the regular courses of the schools or proportionate relief from the daily requirements of the following year. A division of the present school year into three quarters of twelve weeks each, with quarterly promotions, would be the first and most important step toward the organic connection of vacation schools, as a regular part of the school year, with the work accredited as such.

The question may be asked if as much work can be accomplished in the twelve weeks of a vacation quarter as in any other quarter of the year. We have come to understand that the ability of anyone (children especially) to do intellectual work is dependent upon individual vitality rather than atmospheric temperature. We know that the vitality is lowest in winter and early spring, and at its maximum in late spring and summer. The general experience of summer-vacation schools confirms the belief that as much and as effective work can be accomplished in summer time as in any other part of the year if the early morning hours are substituted for the afternoon session; while the opportunities to pursue the various forms of nature study excel those of any other season.

If, however, continuous *attendance* is not desired, continuous *sessions*, with the quarter of twelve weeks as the promotion unit, would make possible the *distribution of vacations* thruout the year and the relief of crowded rooms to a corresponding extent; or, in other words, would increase the school accommodations by 33⅓ per cent.

Is it a wise policy for a city whose enrollment exceeds its seating accommodations to close its buildings for three months of the year, if by any plan of administration these buildings may be made available to relieve the excessive demands of the other nine months? Under the pressing necessity everywhere for greater school accommodations, is it justifiable that the common-school property of the nation, valued at $500,000,000, should be permitted to lie idle from three to five months annually? Compulsory school attendance and compulsory exclusion from school during the long vacation are antagonistic policies.

The general tendency of the educational world to "hibernate" in summer time is contrary to all of the analogies of nature as well as of life in other callings.

The great increase in the number, importance, and attendance of summer schools is not more significant than the fact that this attendance is largely made up of teachers in regular service, who are pleased to devote no small share of a meager salary and of the annual vacation to professional advancement.

The reports of the United States Commissioner of Education show that 75 per cent. of the teachers of the country enter upon their work without any special training whatever, while the training of a large share of the others is much less satisfactory than is required in any other profession. Few who continue in teaching resign to make further preparation. Therefore the training of the teacher *while in service* is a problem of the utmost importance.

This problem would seem to be not difficult of solution when we reflect that the school year for the entire country averages but seven months and rarely exceeds forty weeks. No other calling affords such generous vacation leisure for self-improvement.

The difficulties of the problem lie in the fact that the three to five months of enforced vacation include or coincide with the annual long vacation of the normal schools and all higher educational institutions.

Teachers' institutes and the summer schools are designed to supply the demands for vacation opportunities for professional improvement not offered by the normal schools and colleges; either because their doors are closed, or because their courses of study and term arrangements do not enable a teacher to use with profit the long vacation periods.

While summer schools and institutes have accomplished much, they do not by any means solve the problem of the efficient training of the teacher in service.

The state of Minnesota has led all other states in the establishment of vacation training schools for teachers. From forty to fifty of these schools are in session every summer, for four weeks each, with a total attendance which usually equals or exceeds the entire teaching force of the state; while, until last summer, all of the four normal schools of the state, equipped at an expense of more than a million dollars, were closed, their laboratories and libraries deserted, and their faculties scattered, supposedly taking much-needed vacations, but many of them in reality teaching in these same summer schools, often under most adverse conditions as to surroundings and appliances.

In September, 1895, when the faculty of the State Normal School at Winona reassembled after the annual vacation, during which half of the members had been teaching in the summer schools, a series of special meetings were held to consider the relation of the normal schools to these summer schools. A few conclusions were soon reached:

1. That the phenomenal growth of summer training schools for teachers indicated a demand which the normal schools had not met.

2. That these summer schools were creating new demands which only normal schools could efficiently meet.

3. That, under the existing conditions for admission to teaching service, it is quite as much the proper function of the normal schools to provide for training teachers in service as to furnish a preparation for entering such service.

4. That the rural-school teachers, with an average vacation of five months each year, furnished at the same time the most needy and the most available constituency for such training.

5. That it is an indefensible policy to close the normal schools during that period of the year when teachers are most at leisure to attend school.

6. That the terms of normal schools should be so adjusted in time that the usual long vacations of teachers could be utilized for further preparation, and that the courses so provided should not be special, but regular and progressive, and should constitute organic parts of the full courses offered.

It was decided to recommend, and if possible secure, the adoption of the following general plan:

1. The school year should be divided into four quarters of twelve weeks each, commencing respectively January 1, April 1, July 1, and October 1.

2. The courses of study should be organized by quarters — the work of each quarter constituting a full unit on which credit should be given whenever completed.

3. Classes should be graduated at the close of each quarter and new classes organized at the opening of each quarter, if necessary.

4. Special classes should be organized for graded-school teachers for the first six weeks of the summer quarter (July 1 to August 15), and this work should apply upon regular courses with provisions for completing the quarter's work by non-resident study during the ensuing school year by correspondence.

5. Since the chief aim of this plan was to bring the normal schools into more helpful relations to the rural schools whose interests they were primarily created to serve, the quarters should be so arranged that a rural-school teacher could teach the usual winter term of four or five months —

which would always come within the autumn and winter quarters (October to April)—and attend a normal school one or both of the remaining quarters, with a reasonable vacation; or he could teach the entire school year (October to July) and attend one full quarter each year (July to October).

In this way progressive courses of normal-school work could be completed without withdrawing from rural-school service. This alone would be a distinct gain to the teaching supply of the rural schools.

Incidentally this plan would prove a boon to hundreds of self-supporting young men and women, from whom the best teachers of the state are drawn, who would be enabled to work their way thru the normal-school courses, with little difficulty and with little, or no, loss of time from teaching service.

It was believed that the advantages of training received while alternately teaching and attending school would also commend the plan.

The plan was subsequently approved by the presidents and faculties of the other normal schools of the state and presented to the state normal board for adoption. After full consideration for a year, it was unanimously adopted and steps taken to secure the needed appropriation for putting the plan into operation in all of the normal schools of the state. It was estimated that an increase of 25 per cent. in revenue would cover the expense of the proposed increase in the length of the school year by 33⅓ per cent.

The teachers generally thruout the state approved the plan and gave it active support. Sixty-two out of eighty of the county superintendents, and almost an equal proportion of city superintendents, joined personally in urging upon individual members of the legislature the advantages of the plan. No more popular educational measure ever came before the legislature of the state. The year 1897 was not a favorable one in which to secure appropriations for new or untried measures. The avowed policy of the legislature was to grant sparingly appropriations for the actual necessities only of the state institutions, but nothing for enlargements. Yet, so great was the confidence in the plan, and so earnest was the general demand for it, that the full appropriation asked for the two older schools—at Winona and Mankato—was granted, a larger increase than had ever been granted for extension of normal-school revenues in any one year in the history of the state.

On July 1, 1897, these two schools entered upon the new plan. Duplication of the work of the summer schools was avoided. Students were not admitted for less than a full term or quarter. Those only were admitted to the six-weeks' special courses whose schools would begin before the close of the quarter. Rural-school teachers were not admitted for less than the full quarter of twelve weeks. At Winona the standard of admission was radically advanced to the point of admitting only graduates of high schools or teachers actually in service.

Altho the announcement of the plan was not made until late in May, and forty county summer schools, enrolling 7,000 members, were in session thruout the state, the attendance during the summer was all that could be desired in numbers and surprisingly good in quality. Five hundred were enrolled in the two schools. At Winona 15 per cent. of the enrollment were former graduates of the school, all occupying important positions as teachers in the state, who had returned to avail themselves of this opportunity to enter upon the work of the recently extended advanced course; 40 per cent. were graded- and rural-school teachers; 40 per cent. were high-school graduates. Only 5 per cent. did not belong to one of the above-named classes. The average age was twenty-three years and the average teaching service four years, varying from one term to twenty years.

It was predicted by some that the model or training schools could not be maintained during the summer months; but here again the success was marked, notwithstanding the fact that these are tuition schools. Many parents have transferred their children permanently to the model schools because of the evident advantages of continuous sessions. In the model schools promotions occur quarterly. Vacations of one quarter may be taken any quarter of the year, either semi-annually, annually, or biennially; or the pupils may attend continuously, taking full or partial work with corresponding advancement, if such attendance is deemed advisable.

The advantages of these various options are quickly seen, and varying plans are chosen to suit individual pupils. The work of last summer's quarter was not more exhausting to teachers or pupils than that of any other quarter, nor has it appeared to be less efficiently done.

No year in the history of the schools has shown so large an increase in enrollment as the present. While the lengthened year will show a proportionate increase in results in graduates and numbers instructed, the most evident advantages appear in the large number of teachers in service who are preparing to take up regular courses while continuing their work in teaching; while many students who formerly could not see the way to complete more than the short elementary course now choose the full advanced course under the facilities offered for vacation attendance.

Continuous sessions do not *necessarily* involve continuous teaching service by the faculty. Vacations are granted as heretofore, with the difference that any quarter may be selected, subject to the approval of the management of the school; or, by continuous service, vacations may be accumulated to enable a teacher to secure a longer leave of absence. Additional teachers will be employed as assistants in the various departments who will be competent to take the classes of the absent teachers.

A proposed plan, which is favored by many, provides that each teacher may serve four consecutive quarters and take the fifth quarter for a vacation. This would bring each successive vacation of any teacher at a different season of the year.

Students are not expected to attend continuously, except by permission of the faculty. It is already found that they are not so averse to stopping for rest when it is needed, since work may be resumed at the opening of the next quarter. Similarly, students are more willing to repeat work that has been imperfectly done than under the usual plan of classification, which imposes the penalty of a year's delay it the work of a single quarter is lost or repeated.

Under the usual plan, normal-school graduates are annually thrown upon the market in the month of June, just when the graded-school authorities are seeking teachers to fill vacancies for the following year, The natural result is that the supply is exhausted before the rural-school authorities are ready to act on the employment of teachers for the schools to begin later, in October or November. Hence, only the *undergraduate* supply is left for the rural-school service.

Under the Minnesota plan the classes graduating in September, December, and March will be available for rural-school service. Even tho this service shall be brief, because of the competition of the graded schools offering a longer year, more certain tenure of appointment, and higher wages, it will be a distinct gain to the rural schools, as well as to the teacher, if he is able to say: "My first teaching service after graduation was in a rural school."

The plan was presented to the Committee of Twelve on Rural Schools at its meeting in Chicago, and received its indorsement and approval in both the report of the general committee and of the Subcommittee on Supply of Teachers.

The 160 state normal schools of the United States, equipped with buildings and appliances at an expense of over $17,000,000, graduate about eight thousand teachers annually, which is a small proportion of the needed supply; and yet all of these buildings are closed during three months of the year. An additional expenditure of only about $600,000 would open every one of these 160 state normal schools for the additional three months of each year, and afford fifty thousand teachers annual vacation opportunities for professional study, in addition to all of the advantages of continuous sessions.

DISCUSSION

SUPERINTENDENT R. K. BUEHRLE, Lancaster, Pa.—Swayed chiefly by motives of economy, continuous sessions have been held at the Winona Normal School, and the experiment is reported a success. The utilization of the plant, the saving in the cost of fuel, and in the students' expenses, is very desirable, and, when regarded only from the financial side, the plan deserves commendation. It is also claimed as an advantage that continuous sessions would enable professors, if they prefer to do so, after several years' service, to obtain a vacation of an entire year at a time — an advantage over a few weeks, or even months, every year — and that three or four graduating classes a year would enable the directors of rural schools to secure graduates as teachers for their schools, which they cannot do when there is but one class a year. Finally, it is suggested that, if successful, the holding of continuous sessions might extend itself into the schools generally to great economic advantage.

It is natural that this suggestion of change should emanate from the West, which is less restrained by precedent, where social custom and tradition are less strong than in the East, and where freedom and audacity consequently flourish. Yet efforts in this direction have been made at Harvard, where Professor Shaler reports that it was found necessary to increase the length and frequency of vacations.

It must be confessed at the outset that the simian motive is still too powerful in the educational field, and that imitation is never productive of the highest art, and that the challenging of that which is and requiring it to give a reason for its existence is, therefore, a hopeful sign of intellectual and moral life.

It is not expected of me that I should point out the advantages to be gained by these changes. That has been sufficiently attended to in the paper just read. It is expected of me rather to attempt to peer into the future, and from reason and experience to demonstrate the evils to be apprehended when the change has done its perfect work.

"Almost thou persuadest me" that these changes should be made at once in as many of our normal schools and higher institutions of learning as will best accommodate the teachers in actual service who desire to attend during their vacation. A short summer session — a special course of study adapted to the wants of practical teachers, both arranged, as far as possible, in such manner and under such conditions as will justify the graduation in due time of such vacation students — would seem to have much in their favor. Such changes would fulfill all economic requirements as regards utilizing the plant, without depriving the regular professors and students of their much-needed rest and recreation. It would not disturb the regular normal-school work, brought to its present state of excellence by long years of study and experiment.

But even thus the change is not wholly desirable, for it will most likely cause teachers to enter their profession with less preparation, in the hope and expectation of gradually adding to their literary qualifications in those summer schools, and it would seem that normal schools especially ought to regard it as incumbent on them to do all in their power to render this less possible. It also suggests too much mental application while teaching. There is a limit to mental exertion which should be borne in mind by none more than by the teacher, whose energies are severely taxed by his daily, mentally exhausting labors, and who, when true to his calling, gives away his life to perform his task; for all sympathetic action demands liberal expenditure of energy. From his inmost heart rises his God-given force, the sacred celestial life-essence, breathed into him by Almighty God; hence it is inevitable that exhausted nature will find relief in routine, and that the element of lively sympathy, on which the real value of the service depends, will be lost; and lassitude will be visible on the teacher's platform — all the greater because of the increasing preponderance of women in the profession, whose application to books, whose sympathy, is greater and more readily responsive, but whose energy is less, and less persistent. It is no reply to tell us that this has thus far not been experienced, for the experiment has not been in operation sufficiently long to manifest these effects. There is always a reserve force to meet special needs, but by and by this will also be expended, and then these effects will be very sure to make their appearance.

Even where summer schools have been most successful, as judged by the time of their continuance, as at Harvard and at Lake Chautauqua, they have provided largely for social intercourse, for open-air and experimental and lecture courses, and only sparingly for study from books; and the studies which made the greatest demand on the reason, as, for instance, mathematics, were pursued by small classes, if at all. The fact is that too much importance has come to be attached to schools and books as creators of character. "Among the Greeks, to whom we are yet going to school in philosophy, in literature, and in art, the number of readers, even in the educated classes, was not large." "Men remembered and thought about what they heard." "Education is not the imparting of knowledge, but the teaching to think." It should be constantly remembered that one's calling is to serve him, and not he the calling; that work is a means, whose great end is the creation of character. Hence the man or the woman must not be lost sight of in the teacher. To him or to her, above many others, is the need of association with men conversant with the great affairs of the world imperative. Accustomed to command, to look down upon inferiors at least in intellect, the coming in contact with superior minds acts like a tonic. "The heroes of mankind are the mountains, the highlands of the moral world." "Surely if the worst of men were snatched into paradise for only half an hour, he would come back the better for it."

The sin of our age is haste; we live too fast — indeed, we pride ourselves most on our speed; no cathedrals consuming centuries in their completion for us. The study of mind which Socrates began with men, children finish with us; but behold the difference in the character of the work. Lack of moderation is characteristic of youth and the curse of America. Hence the department store, overwork, overtime, Sunday work, the strike, and the tramp culminating in the commonwealer. Not more work, but more workers, is the need of the hour.

Continuous sessions would make it very difficult to maintain our large, interesting, and inspiring educational meetings of teachers, now so generally held during the long summer vacations, and whose success is to a great extent due to the presence and active participation of normal-school principals and teachers.

Perhaps the chief consideration that still demands attention is the climate. Suppose, for the sake of the argument, that continuous sessions are a success in the serene atmosphere of the height of land, that would not prove that the same, or any, measure of success would crown a similar course in other parts of the country under less favorable climatic conditions. All over the world physical circumstances control the human race. Isothermal lines modify the thinker and the thought. Our union is almost the size of Europe, where school laws and regulations recognize difference of climate in fixing the time of vacations. Must we not do the same here?

Moreover, with us this difference is intensified by the various components which enter into our population. We are all Americans, but we have not been able to lay aside the constitution derived from the fatherland with our allegiance to it. Hence, what may be salutary to the citizen of Minnesota, compounded of Scandinavian, German, and Englishman, will not be adapted to the citizen of Louisiana, boasting of French and Creole blood. The time of our vacations might, no doubt, profitably receive our serious consideration. Is the cold of winter the best time to keep our schools open? Should the older and the younger pupils attend during the same time of the year? Should the vacation occur at the same time of the year in the city and in the country? Should common schools be opened for men and women at certain seasons of the year, when little or no work is to be had, not only in the city, but also in the rural districts? Is there to be much of mediævalism surviving even as regards our vacations? Has the time as well as the duration been fixed by monks best acquainted with the sunny lands of Europe, and hence best adapted to that climate?

Finally, is a rearrangement of the course, so as to graduate four classes a year, economy? Will not the evils resulting from the disturbances and excitements of four commencements instead of one — small classes, lack of interest and regularity in entering and departing from the school — more than counterbalance the advantages promised from the work of the few additional weeks of the previous vacations, even tho mental energy and vivacity remained unimpaired? Nor are continuous sessions at all necessary in order to supply graduates for the rural schools. There is another way of accomplishing this, namely: let the directors of these schools engage their teachers while yet in class, conditionally on their graduation. But I imagine — and the reader of the paper grants this — that the supply is not equal to the demand, and so the rural districts, less attractive financially and socially, cannot secure them. Now, increasing the number of classes will not necessarily increase the number of graduates. This will be done only when more persons enter and remain in the classes until they graduate, and they will do this when greater inducements are offered in the profession.

D. L. ELLIS, supervisor of public schools, Asheville, N. C.— There seems to be some confusion as to what is meant by "vacation schools," judging from the papers read by the distinguished gentlemen who preceded me. It is my purpose to discuss the topic as I understood it, i. e., the vacation school for teachers, and not for pupils of the public charge.

Here, in these states of the South, our needs are peculiar and urgent for some sort of training or culture schools for the better education of those who assume the great and momentous task of instructing our youth. This need will be apparent to you when I say that 90 per cent. of our teachers are scholastically, not to say pedagogically, ignorant.

To determine accurately the facts among my own teachers, numbering 150, I sent out recently an "information blank," and the result showed about ten of that number had received some sort of college or normal training; the others only the culture of the "old field schools." We ought not to wonder at this, in view of the fact that the statistics show that our average school year is only sixty-three days, and the average salary of teachers is only $23 per school month. What is true of this one county in North Carolina is approximately true of the whole rural system of all our southern states.

Now, the remedy for this woeful condition must be found in some sort of training schools, so located as to be accessible to the majority of those who teach, and of such length of term as shall make it possible for a regular course of study, in which these pupil-teachers shall do the work themselves, under expert supervision and direction. We have for a score of years wasted precious time and treasure on the so-called weekly county institutes, at which "windy" theories and impossible conditions were *talked* at the hungry victims of this stupidity, and the poor teachers went home either vague in their conceptions of the teacher's work, or else totally discouraged.

The "state normals" could not reach the teachers, for the expense of attending these widely separated schools precluded the possibility of many of the teachers attending them. Hence, I am frank to urge that the only solution of the question is to bring these schools to the teachers in the counties themselves. At least two of these schools, of two months' session, should be located in every county in the state, officered by the very best and most skillful women teachers to be had. I say women teachers, Mr. President, advisedly. Ninety-nine per cent. of the work of our rural schools is of the lowest primary sort; hence, logically, the training must lie along those subjects of primary schools, and only women are competent to do this work in its truest and best aspect. These schools must be located in the country, and not in the towns, where a low rate of board, not exceeding $5 per school month, can be secured. Let us remember that these teachers are miserably poor, and not able to pay for anything; yet there is no other equal number of men and women more courageous and heroic than these; they are worthy our best efforts to help them to a higher power, and, helping them, we shall raise all our children to that noble state of life which is the birthright of an intelligent citizenship.

BISHOP GOODSELL, of the Methodist Episcopal church.—Tho I entered the assembly without the slightest thought of making an address, I should have a colder heart than I have if I were not moved by this opportunity, and a duller mind than I have if I were not stirred by what I heard here this morning. You will permit me, as a resident of Chattanooga, to add to the welcome you have already had, and to express my great pleasure that our city is honored by such a distinguished body of instructors. It has been a joy to me to meet among you some loving and loved friends and to renew acquaintance with some whom I knew in former days, but of whom my knowledge has, of late, been, as scientific men say, in a condition of "arrested development."

Referring to the subject under discussion, I wish to express my warm sympathy with those who have here advocated periods of rest for teachers and taught.

> "He who worketh always,
> Working without rest,
> Never thinks his greatest,
> Never does his best."

The Master whom I serve found it needful to go into a desert place to rest awhile. His human nature was refreshed by communing with that other nature which as a God he had created. We, his children, have greater need of the same refreshing influence. The man who scaled "the iced mountain top, where birds dare not build nor insects' wing flit o'er the deathless granite," is a mightier and broader man for his climb. We must not forget that the greatest seers and the greatest poets have been men who chiefly breathed the country air. A city street is a limitation. From its pavement one sees but a narrow lane of God's stars; but a ribbon-width of heaven's blue. The city poet is apt to sing pleasant ditties to "My Lady's Eyebrows." But the poet of the country, or at least he who refreshes himself with nature, sings of God's greatest forces and of his greatest works. He who cannot sing can yet feel; and he who feels little can yet absorb somewhat. It has been my lot to work in every state in this union, in every country in Europe, in Japan, China, Corea; but in no country have I found myself beyond the law of rest for inspiration. The emptied pond must have time to gather power for the wheel, else speech issues into vacuity and labor into senility.

Especially do these vacation periods stand related helpfully to you in your great service in assimilating our diverse peoples into one potent nationality. I salute you for the great part you have in this mighty, this difficult, but as yet successful task. More than forty years ago the poet Saxe perceived its weight where he catalogued the strains of blood which are woven into our national life:

> English and Irish, French and Spanish,
> German, Italian, Dutch and Danish,
> Crossing their veins until they vanish
> In one conglomeration!
> So subtile a tangle of blood, indeed,
> No heraldry-Harvey will ever succeed
> In finding the circulation!

But all teachers, Christian and secular, are finding that circulation. The churches, the schools, all the appliances of our civilization, are doing great things in this great work. The proof is at hand; it is passing beyond prophecy into fact that a new people of special genius is now to be formed. You are helping form it. Under your deft fingers comes the plastic matter of young life. From this young life is to come the larger life under richer conditions of the republic. Our genius is not to be the genius of any one nation, like that of the Greeks for art, but a summary of the special genius of all the nations which contribute to our life—that genius you are to tutor. May you be enriched for your work.

GRADING AND PROMOTION WITH REFERENCE TO THE INDIVIDUAL NEEDS OF PUPILS

[REMARKS INTRODUCTORY TO FOLLOWING PAPERS]

BY PROFESSOR EDWARD R. SHAW, SCHOOL OF PEDAGOGY,
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The subject before us for discussion this afternoon is not only an important one, but it is also a timely one, inasmuch as various attempts are being made in different parts of this country to advance pupils as fast as possible, instead of holding them for regular yearly and semi-yearly promotions.

This is not the first time that this problem has been before the Department of Superintendence. At its Boston meeting, in 1893, Superintendent Cogswell presented a most suggestive and commendable plan for the completion of the grammar-school course in three different periods of time and in four ways. At the meeting of the department at Cleveland, in 1895, another plan was presented. The presentation of plans here today will be much larger than the department has heretofore had the pleasure of listening to.

In all attempts at grading and promotion with reference to the individual needs of pupils there are certain conditions which must be reckoned with and which must, on no account, be lost sight of.

The problem must be considered from two points of view — the needs of pupils, on the one hand, and, on the other, the demands imposed by the course of study and the school system itself.

With reference to the needs of pupils, the superintendent must first take into consideration the different degrees of natural ability on the part of the pupils who compose the school. Secondly, he must consider the rapid and slow stages of mental growth that occur in nearly every pupil. The third factor in the problem, from the standpoint of the pupil, is the matter of the absence of pupils from school and some means of making up the time lost by such absence; this absence arising either from sickness, or from an embargo laid by the board of health upon homes and localities where infectious diseases have been prevalent.

With reference to the second point of view, the problem must be considered with reference to the demands of a proper course of study. The newer conception of what should constitute a course of study must not be sacrificed or violated in any scheme for the irregular promotion of pupils. It is not a difficult matter to move pupils on thru the grades at irregular intervals when the acquirement of so much book knowledge in a formal way is all that is required. The problem becomes a much more serious and difficult one when constant provision is made for the thought side of education as above the formal side. The real test, then, of any plan of promotion with reference to the individual needs of pupils must lie in its power to satisfy our newer conception of the course of study and our newer ideas of teaching.

Considered with reference to the school system, the value of any such plan of grading and promotion depends upon whether that plan can be transmitted and carried out by a superintendent's successor. Unless this is possible, the plan will not satisfy. A system or plan of promotion that is a paternal one — in other words, one that has to be cared for from week to week according as exigencies may arise — is not a plan that will commend itself to the minds of progressive and yet conservative schoolmen. The problem, then, of grading and promotion to meet the individual needs of pupils is a large problem, and one that must be considered carefully and conservatively.

SOME NEW-ENGLAND PLANS AND CONCLUSIONS DRAWN FROM A STUDY OF GRADING AND PROMOTION

BY DR. JOHN T. PRINCE, AGENT MASSACHUSETTS BOARD OF EDUCATION

There is no question of school organization at present more important than that of a proper adjustment of conditions to the needs of individual pupils. The assumption upon which most courses of study seem to be based, that just so much ground must be gone over with equal thoroness by all pupils in the same time, is the greatest bane of our public-school system. The courses in use are probably intended to meet the needs and capacity of pupils of average ability. Such is the difference of ability, however, between the brightest third and the dullest third of almost every class of pupils that the work thus required is enfeebling to one part, while it is discouraging or unduly excessive to the other. To neither group is there the stimulus of success with effort. To one group there is success without effort; to the other there is effort without success. The difficulty, it is feared, is enhanced by the want of ability or inclination on the part of many teachers to adapt each lesson's requirements to the capacity of individual members of the class.

There are some signs of reaction against a system which encourages or permits a dead uniformity of ability and effort. The only fear is that the opposite extreme of individualism will be sought as a remedy. As between the practice by which forty or fifty pupils of all degrees of ability are required to do the same work with nearly equal efficiency, and a return to individual teaching such as was carried on in ungraded schools forty years ago, there is but little choice, altho the ill effects of the two practices must be felt in widely different ways. But a choice between these extremes of practice ought not to be necessary. No more useful service can be rendered the public schools than that of devising ways by which the benefits of a class system of teaching will be secured, and at the same time such an adjustment of work be made as will permit pupils of varied abilities to do the most for themselves. To this task many educators have given much time and effort of late. Out of all the plans that have been devised there should be found some which can be readily adapted to any conditions that are likely to exist. It is evident that no one scheme will do for all. A classification which can be made in large schools should not be made in small ones, and a system of promotions that is feasible in small ungraded schools would be wholly inoperative in large graded ones.

In response to letters of inquiry to prominent school superintendents thruout the country, concerning plans of classification and promotion, over eighty replies have been received, from which the following facts and conclusions are gathered.

It is pleasant also to record the fact that in only four cities is the determining element for admission to the high school the superintendent's examination alone. The teachers' judgment alone generally determines the class in which the pupils of the primary schools are placed. Promotions from grade to grade in the grammar schools of about two-thirds of the places reported are based upon the combined judgment of the class teacher and that of the superintendent, or principal. In a few instances the examination by the superintendent, or principal, is made the determining element in all doubtful cases only, or cases in which the teacher is not able to decide.

The intervals between classes or grades, in about two-thirds of the cities and towns reporting, are one year. In the other third the intervals are one half year or less. In the report of the Commissioner of Education for 1890–91 returns from 465 cities and towns of over 4,000 inhabitants show the proportion of short intervals to be much greater than this. Several places report shorter intervals for the primary schools than for the grammar schools.

The methods of promotion will first be considered of those places in which the intervals between the classes are one year.

In about one-half of the cities and towns reporting, special provision is made for individual promotions or promotions out of course. Where no such provision is made, there are reported either few individual promotions or none at all. Quite a number of superintendents report that the matter is left with teachers, with the request that pupils be promoted whenever they are qualified; but in such cases there is either no report of the number of individual promotions, or else the number of such promotions is so small that they may be said to be rare exceptions. A few superintendents seem opposed to double promotions, on the ground that some portion of the course is either done slightingly or else entirely omitted, or, as one superintendent says, "good pupils are spoiled by being advanced beyond their depth, merely because they are bright."

Where special provision is made for advancing pupils out of course, the widest difference of practice and of results is reported. In some cases the teachers are asked to report all pupils who by superior scholarship or by maturity are deserving of promotion out of course. A list of such pupils is kept by the principal or superintendent, and special facilities are afforded those who desire to be advanced. A few superintendents cause each grade to be divided into two sections, according to scholarship, thus enabling pupils to pass more easily from one grade to another during the year. In the primary schools the pupils of a single class or grade are sometimes divided into three sections or groups in the same way. In one city where the latter plan is followed a modified form of the monitorial system is followed, in which pupils from the highest grades often hear pupils of the lower grades in reading, either individually or in groups of two or three.

Several cities and a few towns report the opening of an ungraded school in each of the large graded-school buildings. In this school are placed backward pupils or pupils who cannot be readily classified in existing classes. Here, too, are pupils who are trying to get into a higher grade. The superintendents in their letters and reports speak in unqualified terms of the great good accomplished by the establishment of these ungraded schools. In some places the same end is reached by one or more assistants going from school to school in a building to assist backward pupils or pupils who are trying to get into an advanced division.

A number of superintendents whose schools have the one-year interval between the classes report a plan of dividing the classes into small sections in two or three essential subjects, and of permitting pupils who do especially well in those subjects to be pushed forward. Elizabeth, N. J., is a conspicuous example of this kind of classification.

Of other plans followed in schools having one-year intervals between the classes, a few will be given somewhat in detail.

The plan pursued in Cambridge, Mass., deals only with the grammar-school course, which is supposed to cover six years' time of pupils of average ability. A few weeks after the pupils enter the grammar school in September, they are separated into two divisions according to ability, one division called Grade A and the other division called fourth grade. The pupils of Grade A move forward with the aim of completing the prescribed grammar-school course in four years, succeeding grades being called B, C, and D. The pupils of the fourth grade go forward more slowly, aiming to do each year only one-sixth of the work prescribed for the grammar school. The grades of these pupils in succeeding years are known as fifth, sixth, seventh, eighth, and ninth. At the beginning of the second year the pupils of what was Grade A, now called Grade B, go into a room with pupils of the sixth grade. During the first part of the year the pupils of the sixth grade are in advance of the pupils of Grade B, but, owing to the superior ability of the latter division, they all come together during the latter part of the year. At the beginning of the third year precisely the same conditions exist as existed at the beginning of the first year. The pupils of Grade C recite with the pupils of the seventh grade for a few weeks, when a readjustment is made, the abler pupils moving on at a pace sufficiently rapid to finish the course in two years, leaving the others to finish it in three years.

The fifth-grade pupils are alone in a room under one teacher, during an entire year. The same is true of the eighth-grade pupils. In all other rooms there are two grades or divisions, one belonging to the four-years' course and the other to the six-years' course.

A pupil who begins with the fourth grade and remains in the slower division to the end of the course will graduate in six years, unless he has to repeat. A pupil who begins with Grade A and remains in the more rapid division to the end of the course will graduate in four years. A pupil at the end of the sixth grade or of Grade B may go on with the slower or more rapid division and complete the course in five years. Thus it will be seen that the entire course of study may be finished in four, five, or six years, depending upon the strength or ability of the pupils, and all without the omission or repetition of any part of the course.

√ All promotions, both from the grammar to the high school and from grade to grade, are made by the class teachers, under the direction of the principal and superintendent. No preannounced examinations are given, but there are frequent written reviews given by the teacher, the results of which help to determine the fitness of the pupils to go forward. One feature of the plan which has helped it to succeed is that of the employment of a special teacher in each building whose business it is to assist pupils who are behind in their classes in any studies, or who are trying to get in an advanced class. This assistance, however, is no essential part of the plan. It may be used with advantage in carrying out any plan.

Of the 467 grammar-school graduates in the year 1896, 8 per cent. completed the course in four years, 33 per cent. in five years, 49 per cent. in six years, and 10 per cent. in seven or more years.

One good evidence of the benefits gained by the plan is the kind of work which is done by the pupils after leaving the grammar school. The record of pupils in all grades and courses of the high schools during the past three years shows that those who finished the grammar-school course in four and five years had a higher standing than those who took six or more years in finishing the course.

To the criticism that this plan of classification can be used only in large systems of schools, or in large buildings, it may be said that in one of the Cambridge schools, where the plan is in full and successful operation, there are only 330 pupils, distributed in six rooms, one room having eighty pupils, with two teachers. Of the present graduating class, numbering fifty pupils, four will probably have completed the nine-years' course in six years at the time of graduation, twelve in seven years, sixteen in eight years, fifteen in nine years, and three in ten years.

Added testimony to the adaptation of this plan to a small system of schools is found in Middleboro, Mass., whose enrollment of pupils is about 1,100, the enrollment in the three buildings where the plan is in operation being 474, with eleven teachers. Of the present graduating class, numbering fifty, about fifteen will complete the course in one year less than the prescribed time.

In Woburn, Mass., a plan of "double promotions" has been in operation for some years, and has been attended with good results. In the primary schools the interval between classes is made short by dividing the pupils into small sections. As there are three or more sections in each room, the class intervals are so short as to permit frequent changes, the section rather than the grade being the unit of promotion. The nominal time for the completion of the primary-school course is three years, but many complete it in much less time. In each of the grammar grades the essential features of the entire work prescribed for the year are taken during the first half year, and those pupils who have successfully performed the work, especially in language and arithmetic, at the end of the half year, are promoted to the next higher grade. During the second half year a more minute study of the topics in language and arithmetic already pursued is made, by which an opportunity is afforded for new pupils to do the work of the grade, and for those who have done it imperfectly, to review it. By this plan bright pupils are given the opportunity of passing thru two grades in one year. The number of pupils who won mid-year promotions last year in the grammar grades was 129, of whom 104 received a second promotion at the end of the year. The number of mid-year promotions in 1895 in the same grades was 315. Of this number all but seventy-eight were again promoted at the end of the year. The present total enrollment in the ninth grade is 145; of these three have completed the nine-years' course in six years, ten in seven years, thirty-three in eight years, and ninety-nine in nine or ten years.

In Keene, N. H., a plan has been in operation for three years which embodies some features of plans already described. Its resemblance to the Cambridge plan consists in the division of two grades into A and B sections, one of which goes forward at a more rapid pace than the other, with opportunity for pupils to cover a six-years' course in four or five years. Its plan of reviews at stated times for the convenience of those who omit some portions of the work, as well as for those who need more drill in the subjects reviewed, resembles in some respects one of the essential features of the Woburn plan. In the Keene plan, the A or advancing divisions do not work ahead in all subjects, but only in those subjects in which consecutive work is necessary, as grammar and arithmetic — thereby resembling in one important respect the plans followed in Elizabeth and Woburn. There are other features of the Keene plan which are unique and show the value of skillful planning and careful oversight. There are ten grades below the high school. Of 1,056 pupils belonging last year, forty-eight special promotions were made during the year. In the present graduating class of sixty-four in the grammar school, fourteen will have completed the course in nine years, four in eight years, and one in seven years.

The reports of plans of promotions in schools having short intervals between the classes are almost as varied as those already referred to. In nearly all of these schools the reported number of double promotions during the past year far exceeds the number reported from schools where class intervals are one year in length. The percentage of such promotions, based upon the number of pupils enrolled, ranges from 3 to 30 per cent. In a majority of this class of schools there are twenty-week intervals between the classes, regular promotions being made twice a year. When two sections twenty weeks apart recite in one room to the same teacher, transfers from the lower to the higher division are said to be comparatively easy to make. Sometimes the classes, especially when they are large, are separated into two or more divisions, making the intervals between the divisions only ten or twelve weeks. This arrangement is not unlike that which is made in several cities and towns, by which all the pupils are divided into small sections according to attainments, with provision for promotions at the end of eight, ten, or twelve weeks. There are some differences in the details of plans followed, but, in general, the principle recognized is the same, which is to make as short intervals between the classes as possible, with frequent promotions. This principle was applied in the classification of the elementary schools of St. Louis, twenty-five years ago, under the direction of Dr. Harris, now Commissioner of Education.[1]

Of the cities in this country which have adopted this plan, in whole or in part, Dayton, O., may be mentioned as a conspicuous example. Of the plan in Dayton, Superintendent White writes:

> The aim is to have from thirty to thirty-five pupils in each room. The work is assigned for the year by grades. The pupils of each grade are assigned to rooms, as before stated, commencing with the one having the highest standing, and so on down to

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[1] See report of the St. Louis school board for 1871–72.

the end. In districts where there are several rooms of the same grade it makes classification very close and enables the teacher to present the work to each class in such a manner as to be within the comprehension of each individual child. Each of these rooms is again divided into two classes, according to standing, and the work is presented to the two groups separately. When the work for the ensuing year is completed, the pupils of any group, or any particular pupil in the group, may be advanced to the next higher grade at any time within the year.

It is asserted by some that this plan is only adapted to the schools of large cities, or to schools of large size. Two cities of small size report that they are following the plan essentially with success — Le Mars, Ia., and Centralia, Ill. Of the work in Le Mars, Superintendent Coleman writes:

> Our class intervals are short. In the primaries they are from six to eight weeks, in the grammar grades from eight to twelve. At intervals varying somewhat, each class is reviewed back to the next lower class; but all pupils *very* strong in the work, as indicated by the recommendation of the teacher, are excused from said review, and are promoted to the class that reviews to meet them. Our rate of progress between these reviews is determined largely by the ability of the stronger members of the class, as we expect the others to review soon. This is our sixth year on this plan, and we find an increasingly large number of pupils ready for the promotions.
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> We have admitted three classes into our high school this year — one in September, one the first of November, and one in December. There are forty-nine pupils in these three classes; five of them took ten years to complete their preparation for the high school; five took nine years; eight took eight years; thirteen took seven years; fifteen took six years; two took five years; and one took four years.

In the Centralia schools, 425 pupils of 1,374 — the whole number belonging—were promoted out of course last year, or over 30 per cent. Of the plan pursued Superintendent Mather says:

> Our system of promotion has to do largely with the individual pupil. Each grade is divided into A and B sections. No grade in the system is more than six weeks, or seven, beyond the next lower. When a pupil, in the judgment of the teachers, is able to do the work of the grade beyond, he is promoted to it. With my strong teachers — those of good judgment—I permit the recommendation to take the place of an examination. Every month and many times every week pupils are promoted. By keeping the grades thus far apart, the school is not disorganized, and sufficient encouragement is given to all pupils.

Thus far I have given, somewhat in detail, the plans of grading and promotion culled from letters and reports which are in actual operation in this country. They express in forcible terms the feeling of opposition quite generally felt in progressive centers to the lockstep marching by platoons from grade to grade, which still characterizes the practice of grading and promotions in many schools of both hemispheres.

In all the examples given there is doubtless much that is good. It is evident, owing to varied circumstances, that no one plan is suited to all places; and yet it is possible to select certain common elements of excellence and from them derive some principles of value to all who are seeking to solve the difficult problem of making such grading and promotions as will give individual pupils the largest measure of opportunity. To these principles I will add some conclusions of my own, based upon experience and observation, and upon opinions from trustworthy sources.

1. As to length of intervals between the classes, it is significant that, altho in my recent inquiry only about one-third of the places reported shorter intervals than one year, and in the investigation made by Commissioner Harris in 1893 the proportion of places having short intervals was but a little greater, the opinions of superintendents, as shown in the latter investigation, very generally favored the shorter interval; only sixty-five out of 425 reporting as being in favor of the one-year interval. I place, therefore, first among the principles of grading the making of as short intervals between the classes as circumstances will permit. In a collection of children numbering one hundred or more the gradation should be of such a kind as to permit intervals of one-half year or less in at least two branches of study, and where the number of children is more than two hundred, such intervals may profitably exist in nearly all the required studies. Where the numbers warrant it, as in buildings having four hundred or more pupils, the intervals should be nine or ten weeks in all subjects, and may be less than that in some subjects. Where the number of pupils covering the entire course must be placed under the charge of two teachers, their distribution will depend upon circumstances, such as the relative number of advanced pupils, number of beginners, etc. But generally it may be said that a little more than half of the work usually assigned to the course should be given to the primary teacher and the rest to the grammar-school teacher. An arrangement of classes in both rooms should be made by which the intervals are less than one year between classes in sequential subjects, like reading and number in the lower grades, and arithmetic and grammar in the upper grades. With such classification pupils should be permitted to recite in advanced division in any one or two subjects, whenever they show ability to do the work of that division, with a view of working up into a higher grade in all subjects.

2. Where the work of one teacher must cover the entire course, close gradation in all subjects should be avoided. The pupils may be heard together, or in two or three divisions, in all subjects whose parts are not closely dependent, like language, nature study, geography, history, and literature. In other subjects, as arithmetic and grammar, and some parts of reading, the school should be divided into four or more divisions. Pupils should be permitted to recite in any division or in any subject in which they can do the most for themselves, and be permitted to pass from one division to another whenever they show that it is for their advantage to do so. The more advanced divisions in some subjects may be heard two or three times a week, with correspondingly long lessons assigned if they are full-time subjects. The number of daily recitations in rural schools will depend upon circumstances, but should not exceed twenty.

3. The course of studies as far as possible should be made so as to assist the teacher in adapting the work assigned and called for to the abilities of all pupils in every class. This can be done by designating important or principal features which must be taken by all for a proper understanding of the subjects, and by suggesting supplementary work that may be done profitably by pupils after they have acquired the necessary portions, and while they are waiting for others who have not acquired them.

4. Regular times of grade or class promotions are desirable, with special arrangements for the promotion of individual pupils, or of sections of pupils, whenever they show their ability to perform the work of a subsequent grade. A specific plan for irregular as well as for regular promotions should be made and carried out by the principal or superintendent. As a rule, merely general directions or a reliance upon the judgment of the teacher to promote pupils out of course is not sufficient to meet the requirements of all cases.

5. "Double promotions," where the intervals between the classes are one year or more, and where there is no arrangement by which the work in sequential subjects of all grades is covered, may be a benefit to some pupils in the saving of time, but are likely to be attended with dangers that do not offset the benefit gained. If the course of studies is what it should be, there is in "skipping" a portion of the work a loss which cannot be easily made up.

6. Pupils should not be heard in recitation together in all subjects, but should be separated into two or more divisions, one division of pupils being given an opportunity for study while others are reciting. In some exercises, all the pupils of a grade may recite together, as in penmanship, and some kinds of language and nature study, in the lower grades, and in some forms of written and oral reviews in the upper grades. In some subjects, like arithmetic and grammar, at least three divisions of a class may with profit be made. In large buildings the divisions may be distributed in the rooms on the basis of those subjects in which the shorter interval is made; that is, two or three divisions in arithmetic, constituting one class or grade, may be placed together in one room.

7. Promotions from grade to grade should not depend upon examinations made by a person other than a class teacher. In general, the class teacher should determine the promotion or non-promotion of all pupils whose ability or non-ability to perform the work of the subsequent grade is unquestioned by her. The place of all other pupils should be determined by the principal or superintendent, by means of examinations and such other evidence of their ability as is attainable.

8. Provision should be made in the course of studies for reviews at such times and in such subjects as will permit rapidly advancing pupils to lose no part of the work outlined in the course.

9. Whenever it can be done, the help of one or more assistant teachers

should be secured, whose special work will be to give assistance to backward pupils, or to pupils who are endeavoring to work up into a higher division or grade.

10. For the purpose of knowing the characteristics and needs of individual pupils, a teacher should be in charge of the same class of pupils for at least one year. In some cases where pupils are promoted out of course from one room to another, the time of such pupils with one teacher might be less than a year.

11. Altho the number of pupils to a teacher has not been a special object of inquiry in this investigation, it has been brought out incidentally that attention to the needs of individual pupils demands that in no case should there be more than forty pupils to a teacher, and that, where the ages and attainments of pupils are widely different, as in so-called ungraded schools, no teacher should have more than twenty-five pupils.

DISCUSSION

W. S. Sutton, professor of pedagogy, University of Texas.— In the problems relating to the grading and the promotion of pupils the whole field of education is involved. In this discussion will be given only a brief statement concerning each of the conclusions reached by Dr. Prince.

Concerning his first conclusion, that the intervals between classes should be shortened, there can be no disagreement. Where the interval is one year, there is little opportunity for the bright pupils to exercise their ability to make greater progress than that which is made by those of only ordinary capacity. It is next to impossible for a pupil, without injury to himself, to skip a whole year's work, or in hours outside of school and during vacation to do the work of a whole year as it should be done. The undertaking is one of such magnitude that but few have the courage to make the attempt. The consequence is that in any system of schools where regular promotions are made but once a year the pupils that complete the course of study in less than the time regularly prescribed is very small indeed.

One must commend Dr. Prince's suggestions, that, when the pupils in all the grades or classes must be placed under the charge of two teachers, little more than half of the grades should be given to the primary teacher; that the arrangement of classes taught by both teachers should be so made that the intervals between classes in sequential subjects like reading, arithmetic, and grammar shall be less than one year; and that pupils be permitted to recite in higher divisions than those to which they regularly belong, in case they show ability to do the work of the higher divisions. I see no objection to the use of this same principle in city schools, for that matter. According to the Cambridge plan, this policy is used with excellent effect so far as the pupils of the sixth and seventh grades are concerned. This plan, if good for the pupils of the sixth grade, should be extended to pupils of other grades.

Dr. Prince's suggestion in regard to grading and promotion in the rural schools is in harmony with the report of the Committee of Twelve, in that he says: "In the rural school having only one teacher, close gradation is to be avoided." Whenever the circumstances in a rural school are not favorable for grading it, to grade that school is to commit a most grievous fault.

Second: "The course of study," says Dr. Prince, "should be made to assist the teacher in adapting the work assigned and called for to the abilities of all pupils in every class." He says that this can be done by designating important features of the work, and by suggesting supplementary work for the brighter pupils. In my opinion, a course of study should not be arranged for bright pupils or for dull pupils, but it should be arranged for all pupils. It is not advisable that, in a single class, only the mediocre pupils or the dullards, or pupils of exceptional capacity, be found. Ideal conditions obtain when pupils of varying degrees of intellectual quickness are classified together. The dull pupil is inspired more certainly and more effectually by the effort of his more favored fellow-pupil than he is by the encouragement or compulsion of his teacher. He sees his classmate performing easily and beautifully the work assigned, and he himself determines that what his classmate does he himself ought to do, and he can do, and he will do. But the bright boy can be of great service to others and at the same time serve himself. In his daily work he can be brought to teach his slower companions; and he who teaches a fact, or truth, or subject, reaches a better understanding of it. The bright pupil, by observing the struggle of a duller mind to reach the truth, gains an insight into human nature. He learns by practical experience how difficult it is for man to apprehend and comprehend the truth. He learns that one of the great functions of the intellectually strong is to teach the intellectually weak, and to be patient during the process.

Third: I commend especially the suggestion that, in addition to regular promotions, there be a specified plan for making promotions at any time. I suggest that test questions, questions which deal with the application of general truths, questions that call for independent and, to some extent, original thought, be occasionally given to the teacher by the superintendent or the principal, with the instruction that especial attention be given to those pupils whose answers may be satisfactory.

Fourth: I agree with Dr. Prince in the statement that "Double promotions are likely to be attended with dangers that do not offset the benefits gained," and that, "If the course of study is what it should be, skipping a portion of the work is done at a loss." If a course of study is really well planned, if a close sequence of topics in the several subjects and a close sequence of subjects obtain from beginning to end, skippers are not to be encouraged. The schools of America in a determined manner should set their influence against haste in education.

Fifth: The separation of pupils into two or more divisions I have already anticipated.

Sixth: "The promotions from grade to grade should not depend upon one or more examinations by a person other than the class teacher," says Dr. Prince. I should be glad to see him go a step farther, and say that promotions should not depend upon one or more formal examinations held by anybody. If the teacher is not able at the end of a year of hand-to-hand struggle, as it were, to make an intelligent decision as to the intellectual strength of her pupils, it is extremely doubtful if she herself, or a superintendent, or a principal, can decide the matter by the single round of a written examination.

Dr. Prince's seventh conclusion is that provision should be made in the course of study for reviews, at such times and such places as will permit rapidly advancing pupils to lose no part of the work outlined in the course. I take it that he intends that these reviews shall be of an educative character; that they shall not be mere repetition for the sake of repetition.

Reviews should, at times at least, be written. It is astonishing how fluently the majority of people can talk about all subjects, and yet how little they can write well upon any subject. It is almost alarming to discover how little one knows about pedagogy when he attempts to put it down in cold black-and-white. Writing not only makes one state his thoughts exactly, but it also breeds conciseness of style — a virtue too little known in conversation or in the oral recitation. I believe there should be a period every day when a written lesson should be given. During this period neither teacher nor pupil should utter a single sentence. Silence, the soil out of which thought grows, has an educative value the modern schoolmaster too frequently neglects.

Dr. Prince's eighth conclusion is that, wherever it can be done, the help of one or more assistant teachers shall be secured. It occurs to me that these assistant teachers, while in many instances they would be of great service, are not really necessary when the regular teacher has not more than forty pupils under his instruction, and when the intervals between the grades are not longer than three or four months.

Dr. Prince's ninth conclusion is one to which I heartily subscribe. Every teacher should have under his control a class of pupils for at least one year. If boys and girls were to change mothers as often as they change teachers, I am persuaded that, while it would often result in much relief to the several mothers, the children themselves would evidence lamentable results from the rapid rotation of the maternal office.

The last conclusion stated by Dr. Prince, that a teacher should not have more than forty pupils, all schoolmasters approve. Yet this fact should be continually presented to school boards, and the question should continue to be agitated until it is settled properly.

In closing this discussion, I wish to state three cautions which have already been incidentally mentioned.

1. In any plan seeking to provide for the rapid promotion of bright pupils, great care should be exercised to prevent them from galloping thru the grades.
2. In encouraging rapid and irregular promotions of the bright pupils there is danger that the instruction of the teacher will hit the course of study in the high places only.
3. It is well not to sacrifice the individual in order to serve the general good; but it is better not to sacrifice the general good for the sake of the individual. The ideal school is one in which the good of the great majority and the good of the individual are both subserved.

GRADING AND PROMOTION WITH REFERENCE TO THE INDIVIDUAL NEEDS OF PUPILS

PLAN OF THE NORTH-SIDE SCHOOLS OF DENVER

BY JAMES H. VAN SICKLE, DENVER, COLO.

Local conditions cannot be ignored in a scheme of promotion.

Conditions affecting the problem in my district are as follows: Large, centrally located buildings, enrolling eight grades; buildings of four to six rooms tributary to the large buildings for the convenience of small children for whom the long walk would be a hardship.

The Chicago plan (each building a law unto itself in the matter of promotions) could not be applied where such an interdependence exists all along from third to sixth grade. The Cambridge double track, or long-and-short-course plan, would unduly complicate the machinery. The separation of a class into small, independent groups with separate lessons involves a loss in the scattering of the teacher's effort for which the rapid movement of the strongest group is no adequate compensation.

Our circumstances permit promotion in lower primary grades without regard to fixed dates, but about the third grade we find it best to work *toward* fixed dates. The half-year interval between classes has proved most serviceable after the fourth grade. We admit two classes to the high school each year. As far as possible, adjustments needed between September and June are made within the room, so that a change of teacher may not be necessitated. The classes or divisions in a room vary in number and relative size. They change in both these respects from time to time according to circumstances.

It will be seen that this plan, so far, is practically the plan recommended in Circular of Information No. 7, published by the Bureau of Education in 1891.

After an exhaustive discussion of the class intervals used in seventy cities, we find on p. 20 of this circular this statement: "Of the three class intervals above considered (the year, the half year, and the term or quarter), the half year seems to possess the most advantages and the fewest objections, and this is specially true in grades below the high school, possibly excepting the first and second grades, where a shorter interval may be desirable. This interval is sufficiently short to permit needed promotions of individual pupils, and it is sufficiently long to prevent a too frequent readjustment of classes and class work."

This plan is easily understood and easily administered, and therefore likely to be handled by the average school principal with greater effectiveness than a more complicated one. A class interval so long as to prevent frequent reclassifications and irregular promotions and brief reviews is not now generally defended.

My contention is that the short and varying interval in the primary grades, with the half-year interval in the grades above, is a sufficient development of the mechanism of gradation to safeguard individual interests, so far as any mechanism can safeguard them; that, instead of introducing further complications into the machinery of school organization, we shall find a more hopeful field for effort in devising plans for greater flexibility in *class* management, especially in the grammar grades.

Even if the members of a class could have at a given time equal knowledge, which is impossible, they would still differ greatly in quickness of comprehension and in working power. This would be equally true of a class of fifteen and of a class of fifty. These differences would manifest themselves in varying degrees according to the changing order of studies during the day. The child who is strong in arithmetic may show less strength in language, while another good in both may need more time in geography or history, and so on in infinite variety; while the average strength of the individuals composing the class may not vary greatly. No matter how carefully we grade, we find these differences.

A recitation, as ordinarily conducted, attempts to secure the attention of all individuals in the reciting class during the entire twenty or thirty or forty minutes assigned to it on the program. All members of the class attend to the same thing at the same time; tho often badly mated in point of speed, they must move at the same pace; the quick wait patiently for the slow; if the pace is rapid enough to keep up the keen edge of interest in the quick, the slow are fairly dragged over the ground; so a compromise is arranged which fits neither. At the first subtle signs of lessening interest the teacher redoubles her exertions in order to chain the wandering eye and check the budding yawn. If she is a teacher of ability, she generally succeeds in this, but at too great a cost in vital force, for the energy put forth by the teacher is out of all proportion to that put forth by the pupils. The pupils are kept in motion too much by the will-power of the teacher; the force is external and temporary, rather than internal and permanent; it tends to produce fitful and spasmodic effort. The pupils attend out of respect for the teacher, and from a desire to conform rather than from any feeling of need. Those naturally quick easily become satisfied with an effort far less than their best. Their time might be employed to better advantage than in listening to repetitions of what they already understand, or in spending thirty minutes on what they might do in twenty. Such management makes dawdlers.

The individual plan does not offer an altogether satisfactory remedy, even in schools with a smaller assignment of pupils to a teacher than is possible with us. Is it not possible to retain the manifest advantages of the class recitation so often set forth by Dr. Harris, and yet, as the recitation progresses, allow individuals to drop out and do other work more profitable than simply maintaining the semblance of attention?

Feeling that we ought not to put a premium upon the mere act of sitting thru a recitation, I have watched with some care for the past three years an experiment in this direction tried in two of our larger buildings. It is an effort to do in a systematic way what a few good teachers here and there have done occasionally. It is, therefore, not an invention, but an adaptation. Some of the purposes kept clearly in view are these: to secure better use of time; to fit each pupil to rely upon his own judgment by often allowing him to share with the teacher the responsibility of deciding what he had better do at a given time; to secure, by means of this individual responsibility, willing effort even on the less agreeable studies, thus keeping the pupil fairly even in his work; to secure more study time in school, where conditions favor concentration, and thus to do away with the necessity of "keeping after school" (staying after school is quite a different matter); to enable a pupil to demonstrate his fitness for special promotion; to secure conditions favorable to enthusiasm in the pursuit of efficiency and knowledge by emphasizing these as ends, instead of placing emphasis upon marks, special seats, or rewards of any kind. The central thought is *individual responsibility*.

While no two teachers work in exactly the same manner, the plan followed may be stated in a general way as follows: All pupils are held for definite minimum requirements. (In order to afford facilities for greater attainment, each room is provided with its sets of supplementary books and a carefully selected reference library of from fifty to seventy-five volumes.) While those pupils for whom the minimum requirement in a given subject is sufficient are mastering a given assignment in that subject, others capable of doing more, tho not yet strong enough in all studies to be able to skip a half year, are, by a process of natural selection, detaching themselves temporarily from the class in order to work on some study in which they are weak, or for broader or deeper study of the topic by means of the reference books, gathering illustrative material, or following out some line of interest approved by the teacher. Those excused may at any time be required to rejoin the recitation to give needed help to others. They are thus continually held responsible for the work in hand. Failure to respond satisfactorily at any time, either in advance or review, is understood to be evidence that the pupil in question had not attained that degree of proficiency which would warrant diverting his attention from the minimum requirement from which he had been temporarily released, and his release is canceled. A few experiences of this kind improve his judgment and make him cautious. He strives to make his acquisitions permanent, not merely for the day. He had better make mistakes early in his estimate of himself, and correct them, than to be acting so wholly under prescription that there is no chance for a mistake in this respect. Without this opportunity for self-measurement there is danger that some will develop vanity and conceit, and others excessive timidity, rather than self-respect and confidence. The pupil is in the truest sense educated thru occasions for choice.

A pupil may at a given time find the work in arithmetic and geography all that he can do, while at the same time he is making fuller study, than some of the rest, of a period in history. This he considers a privilege which he works energetically to secure. Another, not so able in history, may get this liberty in some other subject. There will come a time when he may give to the class the benefit of his skill or of his research; thus he has an immediate motive, partly selfish, but not wholly so. He is giving to others. His success awakens a desire in others to be able to make creditable contributions of the same kind; thus all are stimulated to do independent work in spare moments and to find spare moments for independent work. They learn how to find things in books. This is perhaps the most useful single accomplishment that we can cultivate in a child. Books must always be his chief reliance after leaving school.

In a class fairly well graded each pupil will have some study from which it will be safe to release him partially now and then. Thus all get some encouragement from the plan. It secures energetic work without stimulating a hothouse growth. The motive it holds out is a permanent motive and a worthy one.

It is not a plan for hurrying pupils thru the grades. This class presents an even front when entering upon a new division or lesson unit of any study. The development work is done with the whole class. One goes no faster than another, but he *gets* more. One describes a larger circle than another, or, to use an agricultural expression, cuts a wider swath. It is not so much to the pupil's advantage to go thru the grades rapidly as to get all that he is capable of getting while he is going thru.

The plan tends to even up the pupil in the various studies, since making pleasant excursions in favorite studies is conditioned upon fair attainment in all studies.

It secures for the pupil so much additional study time in school that much less work needs to be carried home, and thus it helps to do away with the idea, prevalent in many homes, that the parents are expected to do the teaching, and that the only duty assumed by the teacher is to check up the work and pass judgment upon its quality.

It allows the teacher to devote time to the less able pupils without robbing the others. The less the brighter pupils depend upon the teacher, the better. The aim should be, as rapidly as possible, to make all pupils self-reliant.

It affords opportunity for the development of latent strength, and gives the teacher a safe basis for determining the fitness of individuals for working with the division a half year in advance. We find that the child irregularly promoted invariably makes an enviable record in the higher class. One hundred and forty-two such promotions have been made in our schools since September last, or 4½ per cent. of all promotions. Five and three-tenths per cent. of all pupils now in the grammar grades are where they are by special promotion.

In the eighth-grade class this year, four have finished, or will have finished, the eight-year course in less than six years, seven in six and one-half years, twenty-one in seven years, and twenty-four in seven and one-half years. Able pupils are not kept marking time, but are advanced whenever they show the requisite strength. The half-year interval does not prevent this. The year interval would add materially to the difficulty.

In the two buildings in which this plan of class management has been systematically tried there has been apparently greater attention to individual needs than in the other buildings. One hundred and sixty-one pupils finish the work of the eighth grade this year in three buildings. In one building, 57½ per cent. finish in eight years or less; in another, 62½ per cent.; and in the third, the one pursuing the ordinary plan, only 37½ per cent.

I do not mention any of these figures as showing progress at all remarkable, for, by force of circumstances, in all three of these buildings the school day is cut short for all first-year pupils, each child attending but one-half day. Thus a reasonable allowance would be eight and one-half years to complete the course. The figures seem to indicate, however, that in two buildings the plans are more favorable to individual advancement than those used in the third, since I know of no other conditions affecting one school more favorably than another, such as strength of teaching force, nature of the population, etc.

It is not denied that this plan requires more thought and broader preparation on the part of the teacher than the ordinary class plan. But a teacher whose attention is thus directed constantly toward individual needs inevitably gains so much in skill that after a time, all things considered, the work seems easier than before. There is ample compensation for the energy spent in planning work for those temporarily excused from recitation. These are the active spirits who ordinarily find means to divert themselves at the expense of the good order of the room. Kept fully occupied with self-imposed tasks, they cease to be a disturbing factor. The spirit of the room soon comes to be one of self-control and industry. Repression is no longer needed — only direction. A difficult pupil, new to the plan, soon learns that he cannot afford to go counter to public opinion. It is not the teacher, but the spirit of the room, that causes him to settle down to earnest work.

Teachers are hampered by their own training. They have not been accustomed as pupils to any freedom in these directions; hence it does not occur to them that it is possible to give their pupils any freedom. They have little faith in the ability of the pupil to use wisely any freedom.

If, as we glance into a schoolroom, it seems to be in perfect order, every child looking at his book, no one whispering, faces all to the front, teacher's desk and pupils' desks models of neatness, we are pleasantly impressed, and we are inclined to say to ourselves: "That is a good school." Whether it is a good school or not depends upon how these appearances are secured. If every choice of occupation and every movement are dictated by the teacher, the school is a very poor school. The pupils must necessarily grow less and less self-reliant.

Unfortunately, we superintendents, by commending these surface indications, and pronouncing those schools good which have them and little else, have encouraged a vast amount of formalism that absolutely prevents freedom to do the best thing possible for the individual. We thus oblige teachers to cultivate that whole brood of artificial incentives so common everywhere, instead of natural and worthy ones.

In the evolution of our schools, those teachers who most carefully observed these outwards forms were counted most successful; they were, therefore, most in demand, and hence the type has persisted. Most of us, and most of the teachers associated with us, have been brought up under the system; hence it is hard to break away from it. It is so easy to measure a teacher by this standard, so hard to take less tangible things into account.

I regard it important that the class interval used in the grammar grades shall be used at least in the earlier years of the high-school course. If the grammar-grade interval is one-half year, and yet pupils are admitted to the high school only in September, a large number must be held back at a time when it is very important that they should move forward. A larger number of those promoted in January enter the high school than of those promoted in June. They leave the eighth grade on Friday, and begin the work of the ninth on the following Monday. No long vacation, with its many opportunities for a change of purpose, intervenes. Ninety-five per cent. of those promoted last month at once took up the high-school work. Only 80 per cent. of those promoted last June registered in the high school in September. We find the plan no more expensive than the plan of annual admission, since the classes are so large as to require division. Fewer pupils drop out thru discouragement, since failure in any study means only a reasonable review of that one study.

Besides carrying the half-year interval thru the twelve grades, we attempt to care for the interests of the individual in the high school by making a large number of studies optional. Any pupil not a candidate for graduation may study any subject which the daily program will permit. All pupils, to quite an extent, make their own courses. Certain studies are required of all pupils alike if they wish the diploma of the school. Aside from this list, which is relatively small, pupils may choose, with the advice of parents and teachers, those studies which appear best suited to their several needs.

Fixed courses, in which all must do the same amount of work in the same time, do not take account of differences in mental and physical strength. Those who can carry all of the work stay in school; others, becoming discouraged, drop out. We aim to provide for all: "the mentally strong and the mentally weak, the physically strong and the physically weak, the permanent and the transient." Those who cannot carry four studies may take three; those who cannot carry three may, without the slightest loss of self-respect, limit themselves to two.

The official course of study is an inventory of the studies authorized to be taught, with a statement of the aims of the school, suggestions as to the amount of work a pupil should undertake, the subjects characteristic of certain courses, the proper grouping of studies, etc.

At the close of each half year each pupil receives a certificate showing the studies successfully pursued and the number of periods per week devoted to each. When he gets enough of these certificates to show that the official requirements have been met, he receives the diploma of the school, which bears on its face a record of the subjects pursued and the time devoted to each.

Each pupil may work according to his strength by choosing just the number of studies that his physical and mental ability permits. He may take as long a time to earn his diploma as he needs—five years if necessary ; or, if possessed of sufficient physical and mental vigor, he may earn it in three and one-half or three years.

The aim of the pupil's effort is the mastery of distinct subjects of study rather than the maintenance of a general average. The pupil does his work more enthusiastically since the studies are largely of his own choosing. His course may not differ materially from one that would be chosen for him by his teachers, but it makes a vital difference in the spirit with which he undertakes it whether he loads himself with work or is loaded by another.

The plan has been in operation in our school for three years. We have noted that the pupils do more work and better work than formerly. More pupils remain in school to complete a course. The development of natural talent is encouraged. Of 102 graduates (three classes) no two have pursued exactly identical courses.

RECAPITULATION

A class interval less than a half year is desirable in the lower grades.

The class interval may be longer as the pupils become older and able to work more independently.

In the grammar grades and in the high school the half-year interval is satisfactory.

As the mechanism grows more rigid, owing to the necessity of consolidating classes at fixed dates, freedom to make class management flexible steps in to the rescue of the individual.

The pupil is educated by a gradual increase of responsibility, and the accompanying necessity of choice, till finally a most important choice that of his high-school course, is intrusted to him in part.

THE ELIZABETH PLAN OF GRADING

BY WILLIAM J. SHEARER, SUPERINTENDENT OF SCHOOLS, ELIZABETH, N. J.

Of the many difficult problems which confront those who are responsible for the organization and administration of the schools, no other one is more perplexing than this one of grading. No other one affects more vitally the present and future welfare of the pupils in the schools. No other one is of such interest to the parents who are solicitous for the progress of their children. No other one is of more immediate interest to the principals and teachers who have been compelled to work under the present mediæval plan, which has long since outlived its usefulness. No other one is such a source of worriment to conscientious superintendents who realize that the system of grading, which was intended faithfully to serve the children, has become their tyrannical master.

All must admit that teachers vary greatly in knowledge, power, skill, and many other ways affecting their efficiency. None dare deny that the children of every grade differ widely in age, in acquirements, in aptitude, in physical endurance, in power of attention, in their rate of mental development, in the time of entering school, in the regularity of attendance, and in many other ways influencing their progress; yet, because of the manner of grading and promoting, the graded school tends to keep all of the same grade in intellectual lock-step, not only month after month, but year after year for their whole school lives. Children are not alike in ability or in any other way, and God never intended that we should be held responsible for making them alike. Why, then, should we put them in so-called "educational mills" and attempt to grind them out alike, crushing out that individuality which he meant should be a guide to their education and usefulness, and not a hindrance thereto? Is there any reason why we should labor to produce uniformity of tastes, of character, of aspirations, of ability? Is not individuality of more importance than evenness of grading? Is it not the divinity of the child? Should it not be watched for and discovered, that it may be carefully studied and lovingly guarded? Does not biography teach us that those only have become distinguished who have developed a love for work along certain lines? Is it not time we stop finding fault with teachers because, in spite of all these mentioned differences and many more unmentioned, but not undiscovered ones, they cannot produce "symmetrical nonentities"? Should the teacher, limited in power and by conditions, be criticised because she cannot overcome the differences predetermined by the Almighty?

Surely it is time that the friends of our grand public schools, which are growing in efficiency at an ever-increasing rate, should speak plainly of the defects of the present system and earnestly work for its improvement.

The Elizabeth plan is not an individual plan, but is the result of an attempt to work out a system which will so combine the advantages of class, group, and individual teaching as to make it possible to suit the instruction to the needs of the individuals and enable each to go just as fast as the work can be done well, and no faster. It is no mere theory, but is a plan which has stood the test of a ten-years' trial, and the claims for which are based on the good results which have followed its adoption in several cities, under varying and unfavorable conditions. The plan described is in use in every class in the city of Elizabeth, as well as other cities.

CHARACTERISTIC FEATURES

In place of basing the promotion of pupils, in whole or in part, upon a promotion examination, it is determined by the teachers' careful estimate of the pupils' ability to do advanced work. A premium is put upon the character of the work done day by day, rather than upon the amount of "stuffing" which can be done in preparation for the examination. Thus the pupils are furnished a moderate and continuous stimulus instead of an excessive and spasmodic one. The teaching test is a necessary part of all true teaching, but the promotion examination prevents broad and intelligent teaching, makes out of the teacher a grind, and turns out machine pupils. It is not a good test either of the ability of pupils or of teachers. It is a great temptation to deceit and causes many mental wrecks.

Pupils are promoted to advanced work whenever ready for it, instead of being promoted at a time arbitrarily determined. Surely, there is no good reason why the time of year should determine a pupil's promotion to advanced work. All must agree that it should be determined by acquired ability, rather than by lapse of time. That, under this plan, it is entirely feasible for pupils to go forward at any time is shown by the fact that, during the past year, 60 per cent. of the pupils did so. But for this plan, all these would have had to mark time until the rest were ready to go forward.

Instead of having pupils roughly sorted into large, loosely graded classes, in which the classification must grow more and more unsatisfactory as time passes, those of very nearly equal ability are placed together in a room. In the essential branches the classes are still more accurately graded, according to ability, into small divisions. Extra divisions are made when necessary, and are not continued longer than they are needed properly to provide for the important differences in the pupils. This is done in such a way as not to greatly increase the work of the teachers. The number of divisions in a grade varies with the number of rooms of the same grade in the building, with the importance of the subject, with the efficiency of the teacher, and with other limiting conditions.

The number of divisions in each subject, as well as the places for individual instruction, is also determined by these conditions, after a careful consideration of the subjects in each grade, and the records of several thousand pupils in the different grades. The number of pupils in each division also varies with the conditions. The larger the number of pupils to select from, the larger the number that can go together for a time without injury. The aim is to have pupils with others of about equal ability, for the nearer the pupils of a class are in ability and attainments, the better can the instruction be suited to their needs, the greater is the power of emulation, the larger the number that can successfully be taught together, the eaiser it is to hold the attention and fix it upon the subject to be presented, and the better the mental training that can be given. While the usual plan provides for but eight divisions below the high school, this method has from thirty to sixty. In his paper read at the last meeting of the National Educational Association, Dr. Harris, our educational philosopher, who stands without a peer, said : "Thirty classes between the first and the eighth years are possible in large schools in cities. That all cities do not avail themselves of this possibility is one of the most serious defects in American supervision."

Under the usual plan, the distances of the classes from each other, and other unfavorable conditions, make it almost impossible for pupils to pass to higher classes, save at the regular moving times. Yet authorities agree that reclassification is the only way of saving the pupils from the evils of the graded schools. Statistics prove that, sooner or later, nearly all of the pupils suffer because of this inability of the teachers to reclassify them. Under this plan, pupils can easily pass from one division to another at any time, when they are found to be either ahead or behind their companions. The need of reclassification, as well as its feasibility under this plan, is shown by the fact that, during the past year, almost 70 per cent. of the pupils were moved to other divisions between the regular times for promotion. This year an epidemic of measles, etc., has caused not less than 30 per cent. of the pupils to lose time. Under the usual plan all these would have to dangle at the foot of the class and lose a year. Under this plan they return and take up the work where they left it, and up to February 16, 1898, 54 per cent. had been reclassified, tho but a small proportion (about 10 per cent.) of these had changed teachers. This was done in such a way as not to hinder, but greatly facilitate, the work of the teachers.

Instead of compelling teachers to take all pupils over a given amount of the course by a given time, this plan allows teachers to advance just as far and as fast as the ability of the pupils will enable them to do the work well, and no faster. Not only do teachers vary greatly in efficiency, but pupils and classes differ in many ways, as before stated ; therefore it is an outrage to require the same amount of work of all, regardless of the different conditions. Surely this making of the time limit the same for all is the greatest mistake of our schools, both public and private. Why should any teacher be criticised because she cannot furnish the brain cells, health, or conditions which some need to keep up with their more gifted companions ?

In place of almost entirely losing sight of the individual, this plan demands attention to the peculiar needs of each. Under the usual plan, as the pupils are crowded into large classes, and all are expected to cover the same amount of the course in a given time, the poor teacher is forced to forget that the class is composed of fifty individuals, and to think only of the fact that all must be at a certain place by the time fixed for all to move; therefore she dare not think of the needs of the individual pupils. Under fear of criticism, she tries to stuff all with the same amount of indigestible matter, in the hope that they will appear big enough to pass the useless examination for promotion. Fortunately, the Almighty has provided the children with good forgetters, and that which would be a mental burden and would result in great injury is soon forgotten. Under this plan attention to the individual is not only encouraged, but required. In the essential branches pupils work in small classes, and also work as individuals at those points where experience has shown there is greatest need of individual work. Thus the teacher comes into close contact with each pupil, than which nothing is more important. For proper mental development, there must be this contact of the mind of the teacher with the mind of the pupil; the separate study of its needs and the separate ministering to the needs which are peculiar to it. Only thus can the strong mind of the true teacher come into life-giving contact with the weaker mind of the pupil for the purpose of restraint, guidance, and development. But while the effort is made to secure all the advantages of attention to the individual, care is taken to retain the many advantages of class and group instruction.

Pupils are generally moved forward by companies, and no record of their ability, acquirements, or mental, oral, or physical peculiarities is sent with them. Before the new teacher learns these, many of the pupils become discouraged because they are not understood, and, for this or other reasons, quit school or get but little benefit therefrom. . . . . Under this plan, such a record is sent with the pupil that, after a short study, the new teacher has the benefit of all that the previous teachers have been able to learn of the pupil. The record shows, not only what the pupils are worth in each branch, but also any defect of vision or hearing, and any other fact which may have a bearing on the character of the work which may reasonably be expected of each. Difficult cases receive special attention, and suggestions as to their management are given for the assistance of their future teachers.

I have mentioned, but briefly, ten characteristics of the plan in use in the city of Elizabeth. Time does not permit even a brief consideration of the individual records of pupils, the extra promotion blanks, the pupils' reports, the record of work done, the report of principals, management of periods for individual instruction, arrangement of programs, certificate of time gained, means of making sure of thoro work, and many other devices, which ten years' experience with this plan has proven to be most valuable aids in securing results without asking too much of teachers and without unnecessary risk to the superintendent. The proper consideration of any one of a score of points mentioned would have required at least as much time as is devoted to this paper. Having spoken briefly, I have necessarily spoken subject to misunderschool for the preparation of their lessons. Thus they may be prepared under the direction of the teacher, who is best qualified, both by knowledge and experience, to give the pupils the assistance which they should have, and whose duty it is to relieve the parents of this task. Time is provided, both morning and afternoon, for individual help.

Intelligent principals and teachers realize the weakness of the usual plan. More than 90 per cent. of the principals and teachers who have worked under this plan have given, in writing, their reasons for preferring it to any other.

As published, these opinions show that the benefits to the teachers are as many and as marked as those reaped by the pupils. When the plan was started, all were opposed to what they thought the plan would be. On all sides interested parents have expressed great satisfaction with the results obtained.

If pupils receive the same amount of instruction as they would under the usual plan, they would get it in much less time. Pupils now average a loss of about two years. Under this plan they will average a gain of not less than two years. Thus there would be saved to the district what it would cost to instruct a pupil for that time. When this is multiplied by the number of pupils, the financial saving becomes apparent. Add to this the amount saved by the lengthening of the pupils' productive lives, and the gain is enormous, tho not to be compared with the gain in improved mental habits.

MINIMUM PREPARATION FOR TEACHING

BY HON. PRICE THOMAS, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, NASHVILLE, TENN.

It will be excusable, I hope, if this paper is confined largely to a discussion of this subject from the standpoint of the conditions existing and the changes needed in Tennessee and the South.

The preparation of teachers contemplates the existence in each state of a system of schools uniting harmoniously all those classes of schools which have their part in the training of teachers. Those should be:

1. The primary schools, under teachers holding primary certificates, with a uniform course of study, preparing pupils to enter the secondary schools.

2. The secondary schools, under teachers and a principal holding secondary certificates, preparing pupils to enter the state normal college or freshman class of the state university. This school should be centrally located in the school district, which should, with few exceptions, be

coextensive with the civil district. Its principal may also be the district superintendent.

3. The state university and *bona-fide* colleges of equal grade.

4. The state normal college or a department in the state university, issuing primary and secondary certificates.

5. The state teachers' institute, issuing primary and secondary certificates.

The minimum requirements for a primary teacher should be equivalent to those necessary to obtain a primary certificate from the state normal college.

The requirements for entrance into the state normal college for a primary certificate should be the satisfactory completion of the primary and secondary courses of the public schools.

For a primary certificate from the state normal college one year's course of study therein should be requisite; for a secondary certificate there should be required a diploma from the academic department of the state university, or a college of equal rank, and a two-years' course in the state normal college.

The course of study necessary to obtain a certificate from the state normal college should be purely professional. It should consist of:

1. A course of professional reading, including text-books on methods, pedagogics, school management, psychology, and history of education, and some standard school journal.

2. Essays on professional subjects and the reproduction by the student of the lectures of the instructors.

3. Daily observation, with professional explanation of model primary teaching.

4. Practice in teaching primary classes under the direction and criticism of the normal instructor.

Practice in teaching under the direction and criticism of the college instructor, and the observation of model teaching, are necessary for the correction of false ideas of instruction which may have been imbibed from former teachers, and which it requires practice and time to eradicate. These are too apt to be unconsciously adopted by the young teacher, when thrown upon her own resources in her initial performance in the schoolroom, unless that first teaching be under the direction of her tutor. But when correct methods have been observed daily for months, and practice has been had in such methods, the teacher will have had them so impressed upon her mind, and will have so "learned to do by doing," that she will be at home with her work on the fatal first day as an independent teacher. The model school is the teacher's laboratory of the teacher's training school, where the normal student can see and have explained the method, its reason, object, and result, and where she does her laboratory work in mind study, child study, and character study.

There are several reasons why the normal-school course should be purely professional. There are hundreds of schools in each state where subjects can be learned as well as in the normal college, while few states have more than two or three *bona-fide* normal colleges. The entrance requirements should be such that the normal colleges should be relieved of the work of teaching subjects. Their resources could then be all expended in giving to the teacher the professional training which many so much need.

The best results are reached by illustrating methods by teaching subjects familiar to the pupil, and subjects which the student will afterward teach. The child studies subjects with the view of learning facts—of obtaining knowledge, while the true teacher idea is the development of the mind—the growth of the powers of perception, reason, and resource. The child must always have learned the elementary subjects in a more or less superficial way. It is best that the normal student review these subjects from a different standpoint, with the view of teaching them, with the idea of giving reasons, with the purpose of becoming master of them. The child follows the author of the text and the teacher blindly. The teacher in training should study from the standpoint of equality with the author—should get at the foundation, and should be able to teach without a text-book, if necessary. To "know how to teach" it is not only necessary to "know how to study," but to know also the purpose of study and its results, and to know the subjects from the top and from the bottom—from the pupil's standpoint and from the teacher's. It is true, not only that the "methods of teaching can best be illustrated by teaching," but by teaching again to teachers, as teachers, what they have formally learned while children, as children. I conclude, therefore, that normal schools for primary teachers should teach only primary subjects, and these only for purposes of illustration of methods and reasoning; and, for the same reasons, primary normal students should observe only primary model teaching and should practice teaching with primary classes only.

One of our troubles in Tennessee lies in the fact that "practice teaching under criticism" and "observation of good teaching" cease with graduation. We need that the county superintendent should continue in the secondary schools, and the district superintendent in the primary schools, the work of the model teacher and the critic teacher of the normal school. Our city schools, and a few districts in some of our counties, profit by this critical supervision. In this we have most satisfactory results, while in the country schools generally they are poor. It may be argued that the standard for the country teacher should not be as high as for the city teacher. I think it should be. The country school ought to be as well graded, as well taught, and in every other way as good as that of the towns and cities.

It is a calamity that the best people in the country are moving into town to educate their children. The country communities suffer from the loss of their more intelligent and progressive citizens. The cities and towns are crowded by non-producers, unfit for town life and unhappy in the change, while their children are surrounded by influences in the towns which are not so wholesome as those of the country life to which they were born.

But the state normal school cannot supply our schools with professional teachers. The state and county institutes must make up the deficiency. These institutes should be devoted to purely professional training, such as has been suggested for the state normal college. The requirements for entrance to these institutes should be the same as those necessary to enter the state normal college, with the addition of the careful study of the subjects, above mentioned, in pedagogics, psychology, history of education, etc. Primary certificates should be issued by these institutes only upon satisfactory examination of these subjects, and on the subjects taught in the primary and secondary schools.

The object aimed at in fixing the standard for primary teachers should be the improvement of our country schools, especially, and as a prerequisite thereto the creation of a body of professional teachers. This will bring about the following results:

Professional teachers will do better work and thereby increase the interest in education; the school fund will cease to be used for pensioning incompetent relatives and friends of school directors and politicians, and wasted in many other ways; the proper use of the funds, the increase in the interest and efficiency of the schools, and the growth of the intelligence and morality of communities will be accomplished; the people will demand that the state and counties provide for the proper education of the people in the country, as well as in the towns and cities; and the teacher, doing the work of a master workman, and not that of an apprentice, will receive a master workman's wages.

RECIPROCAL RECOGNITION OF STATE AND NORMAL-SCHOOL DIPLOMAS BY THE STATES

BY Z. X. SNYDER, PRESIDENT STATE NORMAL SCHOOL, COLORADO

In opening this discussion, we present some data taken from the report of the committee of the Normal Section of the National Educational Association at Milwaukee.

The data are taken from the investigation of Inquiry 9, "Recognition of diplomas of other state normal schools in other than the state in which they were issued."

1. Are diplomas from normal schools of any other state than your own recognized in your own state? Answer: Yes, 15; no, 21; conditional, yes, 5.

2. If so, to what extent? If all states are not recognized, name those that are. Answer: Michigan recognizes Pennsylvania, New York, Indiana, Delaware, and Wisconsin; Wisconsin recognizes New York, Illinois, Massachusetts, Pennsylvania, Kansas, and Michigan; New York recognizes reciprocity.

3. If none are so recognized, state reasons why. Answer: No law, 14; unequal standard, 6; no need, 4; reciprocity, 2.

4. Do you think it would be well to have comity of states in this matter? Answer: Yes, 31; no, 3; no answer, 14.

5. If such a plan were adopted, would it not be necessary for the normal schools in the several states to have courses of study approximately equivalent? Yes, 36; no, 4; no answer, 10.

6. What plan would you suggest to make normal-school diplomas national in their significance and legality? Answer: Legislation, 4; controlled by National Educational Association, 2; reciprocity, 4; not answering, 29.

The above data were gotten from the state superintendents of the forty-eight states and territories.

(1) It would seem that there is a majority of the states that do not recognize diplomas from other states. (2) There are states in which the law forbids recognition, and a number in which the law is silent. (3) There is a general feeling that there should be recognition.

It may seem strange that a representative of Colorado should argue the affirmative of the proposition. Colorado is a very exclusive state. No credentials whatever can be recognized under the present law. It is because of these conditions that we are led to feel that such a law is in a large degree absurd.

It is not because we are anxious for *our* diplomas that we urge the matter. It is because of *your* diplomas. Few of ours leave the state; many of yours come. It makes no difference what the qualifications of an individual may be, were he to come to our state he would have to undergo a petty examination.

It seems that there are a number of reasons why there should be national recognition of the state diplomas.

It would be a great convenience to the individual who held a state diploma to have it recognized in any state. It is a matter of no little concern to an educational man to be subjected to an examination. An individual who has been devoting his best self to his work of teaching is very properly disqualified to pass the ordinary technical examination. Such an ordeal chagrins him, makes him hate his business.

It has driven good men out of the business. It would be about as consistent, in the selection of a college professor, to require him to pass again the entrance examination. Not one in twenty who has been out in life twenty years could pass it. It is to his credit not to be able to pass it.

It is a courtesy that should exist among the states. There seems to be a lack of faith in each other's work. It sometimes seems that it is the teaching fraternity itself that stands most in its own way. The war-cry seems to be examination. As Sir Thomas Browne says: "It is a practice that savors much of pedantry." Let us believe that other states do good work.

National recognition would tend to raise the standard of many schools. Especially would this be true were there a minimum requirement. It would inspire schools that now have meager courses to enlarge, expand, and enrich their work, that they might receive national recognition. No school under the control of the state would want to be cast out of recognition.

It would tend to professionalize teaching. Professional spirit would become more organic. It would tend to vitalize the great army of teachers. This matter of disregarding the work of other educational men, ignoring training that is at par with the best, tends to deprofessionalize. It has been said that educational men are slow to move, and that all great educational movements have been forced by laymen. Be this as it may, the teaching fraternity in this country would be more respected, would be more professionalized, by a national recognition of preparation for teaching.

It would tend to develop the notion that we have a common country, common interests, common fortunes. It would tend in general to nationalize. There is considerable tendency to provincialize. This tendency follows somewhat the geographical political divisions. This tendency to localize interests is seen in the bitter sentiments expressed on various political issues. It seems that everything possible should be done to bring about homogeneity of sentiment among the American people. Out of such only can grow the strongest patriotism. This must come thru education. If it is to come thru education, there must be such sentiment among the educational men of the country. There must be a recognition of the labor, scholarship, and worth of a man as determined by his fellows where he has worked, and not by a petty examination, which only tends to chagrin and mortify him.

It is said that General Grant expressed himself that, if the national university had been founded when Washington made his donation, the Civil War could not have occurred. It would have developed such a homogeneity of sentiment for man's freedom that long before the Civil War we would have had a free people.

If this country is to work out her mission, it must be done thru her educational system. The facilities must be American; they must be national. While this matter of professional recognition may seem but a small one, yet it is one of the factors which tend to nationalize our system of education.

Summing up, we would urge that the educational men of the country lend their support to bringing about a recognition of state diplomas of all the states, by all the states: (1) because of the effect upon the individual; (2) because it is common courtesy; (3) because it would tend to raise the standard of the schools; (4) because it would professionalize teaching; (5) because of its general effect upon the nation.

While we may all agree to a national recognition of diplomas, it might be difficult to accomplish it.

Some have suggested equivalent courses, some uniformity of courses, in training schools. It would seem that a similarity of training would furnish the best criterion by which to determine the product. As most of the state normal schools are at the present time, no state would suffer materially from difference of product. Should a minimum course be adopted by the state normal schools and a minimum examination for state diplomas, it would help to solve the difficulty.

As to its regulation, it would have to grow out of legislation. The states reserve the right, as they should, to regulate their own school affairs; yet the educational men of the country can do much to bring about such legislation as will further the organic unity of the national life.

MEDICAL INSPECTION OF SCHOOLS

BY W. B. POWELL, SUPERINTENDENT OF SCHOOLS, WASHINGTON, D. C.

To make life safe and to secure health and happiness to those who are governed are among the most important duties of government. Life, liberty, and the pursuit of happiness may not be restricted by government directly without inducing disrespect and even contempt for that government. But it is equally important, and is imperative from a moral point of view, for the government to see that rights, privileges, and blessings are not curtailed or endangered by carelessness or shortsightedness on its part, or by any lack of effort on its part to prevent curtailment and danger. Sickness and disease restrict physical liberty and prevent the pursuit of happiness. It is unwritten law that privileges increase responsibility, and that responsibility is increased by power and authority. Complex conditions of human society multiply the duties and responsibilities of government, and, while increasing privileges, they impose restrictions on the individual. Restrictions imposed by government increase the obligations of government to protect the governed from those ills that logically result from such restrictions.

Prevision and supervision, prevention and formation, are talismanic words in the vocabulary of human interests. The school, the public school especially, by dealing with people in masses, has developed the value of the activities in human society named by these four significant words. By prevention and formation, which can be secured thru broad, intelligent prevision and supervision, both the mind and body of the child may be symmetrically, if not perfectly, developed, and a healthy condition given to both. Correspondingly is this true of the community and the state, which are made of individuals. Not only does a government derive its just power from "the consent of the governed," but it gets its character from the same source. There can be no doubt in the mind of any well-informed person that a large percentage of the physical ills of a community may be prevented by intelligent prevision and appropriate care in formation. The signal service of the government saves to the people by preventing loss that would equal many times its cost. This benefit of the service, however, is insignificant when compared with that of saving life and preventing accident to human beings. By effort of government, local and national, in the summer of 1892 cholera was prevented from getting a start on this continent. What dark evils were thus averted may only be guessed; they can never be known. The value of quarantine is so well understood and appreciated that argument is not needed to cause it to be employed by government in cases of apparent wide public danger; it rests on the principle of prevention. It is customary now in all intelligent communities to quarantine cases of certain kinds of disease, as small-pox and diphtheria. But he who knows, as does the superintendent of schools, the conditions existing at the time of quarantine in many cases knows also how much more effective and perfect would be such quarantine, and how much of contagion and harm would be prevented, were the prevision earlier, more accurate, and more intelligent. Most of the cases of quarantine in our communities come too late to prevent entirely the spread of the disease which they are intended to check, thus causing much distress and hardship.

The exercise of power in the enforcement of school attendance or of effort in securing it is dangerous, and therefore unwise, unless it is accompanied by a conscientious appreciation and an adequate exercise of the duty of seeing that the assembling of pupils may be had without physical or moral harm. Not only is it the right, but it is the duty, of the community or school authorities to know when pupils assemble that the rooms in which they work shall be, not only well, but properly lighted; not only well, but properly warmed and ventilated; not only well, but properly seated; that contagion is not only not imminent, but that it is not possible. This condition of affairs, however, can be secured only by intelligent, expert prevision, which prevision is not possible by the present ordinary means; that is, thru the school as it now exists. There are not appliances for determining now. There is not expert knowledge. Skill to see and wisdom to determine are not possessed. We have not yet acquired these, except in small degree. We know only partially of lighting, warming, ventilating, and seating. We know little or nothing of the evidences of approaching disease of any kind. There is no doubt that in the significant movement now going on, resulting already in making school better and more effective, the larger share of such benefits or improvements has resulted from increased knowledge on the part of teachers and school officers; but we have not yet knowledge enough to do that which advancing society demands of the school. The increased, accurate knowledge that scientific investigation has given us in recent years makes it possible to prevent much of human suffering and danger, and thus is added a corresponding duty to the work of the school. Increased knowledge of the laws of sanitation, sources of physical evil, and causes of contagion makes prevention the most important function of the health department of government.

Contagious diseases are not the only ills against which to provide. These are not the only diseases to which to apply prevention, guided by broad and intelligent prevision. There are diseases not known as acute, sporadic, infectious, or contagious, whose premonitory symptoms, or whose beginnings at least, can and ought to be detected in time to prevent development. The expert physician will not only know these beginnings promptly, but he will know their causes, also. If the causes exist in the schoolroom, they can be removed; if they exist at home, something, at least, may be done toward removing them. Diseases of the eyes, the ears, and the lungs; heart troubles and numerous other ailments, have their beginnings, in many cases, in heredity, but in quite as many instances they result from the conditions of environment, the formative agencies of life after birth. They may be found in the home or in the school. The way pupils are allowed to sing, the way they are allowed or forced to write, the way they are allowed or forced to study and recite, the way they are compelled to sit, may be harmful. Conditions may exist in the schoolroom or school yard which will lead to the impairment of lungs, or will produce rheumatism or other ailments that may develop during the formative period and become chronic, yet the teacher, the principal, the superintendent, or other school authority, be ignorant of their existence. Dirt and cleanliness have meanings from the standpoint of health differing widely from those commonly given to them from the standpoint of neatness in housekeeping. Dirt from the point of view of the bacteriologist has a more significant meaning in relation to human interests than it has from the point of view of the most careful janitor or the model housewife. To be clean from a sanitary point of view is to be free from that which will cause disease. This kind of uncleanliness can be detected only by the expert. Only he who has learned to do the right kind of seeing can do this work right. If the state which locates, lays out, and prepares a highway over which people may travel is responsible for accident or harm occasioned by neglect to repair damages or breaks in such highways, or breaks in bridges forming parts of such highways, it must be that the state which provides places of meeting, or allows places of meeting to exist, and compels or allows the assembling of children, yet neglects to provide by intelligent prevention against contagion or any cause of disease whose evidences can be detected by expert seeing, will be held responsible for sickness thus induced. It is certainly responsible from a moral, if not from a legal, standpoint, and if it is responsible from a moral standpoint, the state has proved itself fair enough thru just interpreters of law to assume the legal responsibility.

THERAPEUTIC ASPECT OF THE QUESTION

I have shown in the foregoing the value of prevention rather than that of cure or therapeutic effort. I have pleaded for the "ounce of prevention." The subject under consideration is important enough to deserve attention from the standpoint of therapeutic or curative benefits. Many children are defective other than those who are blind, deaf, or feeble-minded. The state takes care of the blind, deaf, and feeble-minded by the most approved methods in costly institutions. Why should it not, with equal justice and propriety, care for those who show beginnings of spinal curvatures, symptoms of pulmonary troubles, defective eyes or ears, symptoms of nervous weakness of various kinds? A large percentage of these persons showing only the earliest stages of defective conditions when sent to school may be promptly benefited by application of easily found remedies, or perhaps chiefly by change of manner of living. To detect these conditions, however, requires the skill of an expert. Many children have difficulties with one or both eyes of which the parent is entirely ignorant. But these difficulties, being at first very slight, can be cured at small cost. The trouble may be checked by the use of properly adjusted glasses. The therapeutic or curative value of the work of which I now speak is based on the idea of "a stitch in time." This "stitch in time" would save many an eye and many a pair of eyes, many an ear and many a pair of ears, many a throat and many a pair of lungs. Some children ought not to come to school at all until they have had definite medical treatment, or at least expert technical treatment, for ailments that are rapidly leading them to early graves. These ailments are more than likely to be aggravated by the conditions and restrictions imposed by school life. In very many instances these require, to prevent their further development, only a slight change in the manner of living, on the part of the afflicted, respecting eating, sleeping, or dressing. It would be a greater blessing to the boy, and if to the boy to the community or state, to have saved for use during a long life of activity two eyes, than to give him a modicum of school instruction and thereby either ruin his eyes for life or so aggravate their condition as to make them an annoyance to him while he lives, and prevent him from acquiring knowledge and making himself a useful man by one of the chief instrumentalities of knowledge-getting. It is perhaps fortunate, if our own happiness is considered, that we do not know the number of incipient spinal curvatures that are aggravated by school life and developed into permanent and serious deformity. By how slight an effort, from the standpoint of expert knowledge, such serious results may be prevented, every school officer should consider with profound, if not solemn, attention. From the humanitarian standpoint alone the discovering of congenital difficulties and incipient ailments induced by wrong living, pernicious environment, or the wrong use of those things that affect and make life in the formative period, and the judicious giving of direction or advice to parents or guardians for the application of simple but correct methods for curing or improving conditions which may be easily effected, are primary and emphatic duties of public-school authorities. It is no less the duty of the state to care for these incipient cases of disease than it is its duty to care for those whose misfortunes are more pronounced. The relation that the public school sustains to government in a democracy makes it imperative that the physical care of the future citizen shall not be neglected, because it is certain that it cannot be neglected without menace to citizenship, which, to be of highest value, must be pure and physically sound. By how slight an obstruction at the right place the falling rain is directed toward one or the other side of the continent; by how slight a beginning a break in the dam, undiscovered and unchecked, results in untold destruction of property and human life! These but poorly illustrate the menace there is to human society in incipient disease among the ignorant. I ask you to recall Johnstown and the Conemaugh dam. The proprietor who fails to discover, or, having discovered, fails to check, the widening breach in the structure which holds a great body of water, with its untold possibilities of damage, is accounted criminal by public sentiment. This same sentiment recognizes the responsibility of the state to the citizen, who is a part of the state, respecting all matters that may influence the moral and physical conditions of the individual.

THE ECONOMIC VIEW OF THE SUBJECT

From a financial or economic point of view, the school can well afford the care that has been suggested from the standpoint of prevention as well as that suggested from the standpoint of therapeutics. The loss of time occasioned by sickness and disease resulting from school attendance that might be easily prevented is of money value greater than that which it takes to support the school as it now exists, if the calculation be not restricted to school life alone, but be made to include the value of time lost by parents and nurses, and others involved and affected.

But in a more restricted sense there would be economy in first caring for the health of the children, because the teaching could and would be more rapidly and more effectively done. The growing child not in good health is ill prepared for the psychic building or making which correct school methods are intended to secure. The psychic self is not its true self except in perfect health. The teaching, no matter how attempted or how well done, will, by force of circumstances, be ineffectual, and, more than this, it may be pernicious in psychic effect, and, indeed, is likely to be so; that which is intended to be accomplished may be taken wrong by the child, and, if taken wrong, the psychic effect will be the opposite to that which it was intended to be. Who, then, is to know whether that which is attempted in the schoolroom may not result in the wrong thing, or at least be ineffectual or of little avail? The teacher should know the child physically better than he does. But this first condition of requirements the teacher does not possess.

THE SUBJECT VIEWED IN THE LIGHT OF SCHOOL GOVERNMENT

From the standpoint of school government alone, the police side of the management of schools, it would be profitable and businesslike, and in accordance with the way business matters in human society are generally managed, when managed successfully, to see to it that the children are in healthy condition, and that they are so situated that health, and therefore physical conditions conducive to physical happiness, are assured. Truancy would in a large degree be prevented, because, by teaching healthy children, the teaching exercises of the school would have the effect of giving pleasure and gratification, thus insuring against pleasure-seeking in truancy, as well as in other misconduct. It were better to prevent truancy and dislike for school than to try to cure them by reformatory measures. This would be prevention from the standpoint of control or government, and because, what the child is in the school he is practically when he leaves school; this alone would compensate the state or the community for all the trouble and expense that medical examination and supervision might cause.

MEDICAL INSPECTION A VALUABLE EDUCATIVE INSTRUMENTALITY

The most important argument in favor of medical inspection of schools and school children is the educational benefit it would be to the community at large. Its direct and naturally aggressive tendency would be to make knowledge of the common laws of health universal and to create an interest in the study of social life. Intelligence respecting the effects of modes of living on length of life, on happiness of life, and on cost of living, is very meager, especially among the lower classes of society. The school has reason to know and to understand the disadvantages of this condition economically and morally. Knowledge of these subjects would grow rapidly if the school would take hold of the matter purposively and would cause people to begin knowledge-getting in experience. Medical inspection would result in giving knowledge of conditions and causes, and would suggest changes in modes of living, with reasons for the same. These would cause thought and would give information to satisfy the same, which, with the purposive effort induced in the realization of suggestion, would educate in the most effectual way. This experience would create interest, which, in turn, would insure further knowledge-seeking by means of reading, attending lectures, by inquiry, and in many cases by original investigation and experiment. Is it not the duty of the school to arouse society to intelligent thought on the importance of better modes of life? By no other means can this be done so effectively. Is it not the duty of the school to train people to live better? Is not this the true purpose of the school? The logical place to begin this is with the physical life of society, the one phase of life that has been most ignored by our educational methods, because least thought about, and until now least understood.

One of the most valuable products or important benefits to society resulting from public-school effort in education is that which comes from individual contact of pupils having different degrees and various opportunities of experience. The less fortunate element of society gets the benefit of culture and knowledge possessed by that portion which has much to give, because it possesses much; it has received much by the circumstances controlling it. It should be the purpose of the school to use every instrumentality of possible possession to broaden the child's view of life and of society. The school in many localities has done much for society, beside instructing the children in attendance, by this unobtrusive and generally unobserved influence. It is the crowning value of the public school, and the most assuring reliance of republican government, that its most fortunate children may be educated with those possessing the least desirable advantages in their surroundings, without a social or moral harm. This assuring fact is the patriot benefactor's anchor of faith in free and compulsory education.

The man who controls public affairs will yet be brought to see that the three R's do not, cannot, educate for intelligent citizenship. He will yet see that they do not make even the beginnings of broad, safe citizenship.

In many cities homes have been changed by the instrumentalities of day school. The addition of music to the school work has resulted in taking music to the homes of thousands where before it was not heard. Beautiful, refined rote songs on subjects that are themselves elevating and inspiring have changed the homes for younger children and for parents as well. The introduction of drawing into the schools has been the means of carrying art—crude, indeed, in its beginnings, but valuable in its influence—to homes without number which had before felt nothing of such influence. The effect of song and art on the homes and people who especially need song and art to make beginnings of influences that would result in better and happier lives has compensated the state a thousand fold for all the cost of these so-called fads. The subjects to which art has drawn the attention of pupils, where art has been properly taught, has effected untold benefit to children and parents.

The philanthropic worker in the degraded or slum portion of the ward will tell you that the establishing of the primary school in that locality has changed, not only the conduct of the children, but has changed also the lives of the mothers and fathers, and the character of the homes of that locality. The beautiful song is heard in the doorway now, where before slang, profanity, or sounds of sorrow or anger were heard ; and the drawing of the child or cheap chromo may be seen now on walls which never before had known any attempt at ornament of any kind. These are evidences of the beneficial results of school effort to him who knows how to see; who knows what influences effect better lives and better living.

The introduction of domestic science, into the school of the cities especially, has had its influence, not only on those who are taught, but on thousands of mothers and older sisters. Evidence that is unmistakable in character, and that is voluminous in amount, assures us that the sewing, and the cooking, and various other economic lessons learned in connection with them, affect thousands of homes, making them better and more comfortable, thus producing wiser, better, and more contented citizens. The dollars that the community spends for cooking schools, manual training schools, sewing schools, are insignificant in value compared with the increased happiness, the broader-minded citizenship, and resulting safety secured to society. He who looks on these things and sees them in an opposite light looks only from the standpoint of dollars. If he will look and see from the standpoint of humanity or good government, he will never again speak of them as fads, or regret the increased expense of the school, or criticise the multiplicity of kinds of work that the child is caused to do because of them.

There is a more important, a farther reaching, and more potent instrumentality yet to be brought to the schools than has yet been introduced, except in a few places : that of medical inspection. That it is by means of which the people may learn how to live better, may learn how to detect imminent evil, and how to prevent it. That it is by means of which the people will be induced to study their own environment and the influences that have made them what they are, and are continuing to affect and fix their condition. The school must ally itself more with society, and make itself felt more as an instrumentality in society for benefiting the individual and making society better. One of the most fruitful ways of doing this is to interest the intelligent, educated, scientific element of society in its welfare; to learn from this element, and to invoke its aid in every particular in which it can give benefit. The benefit to be derived from this wise and competent source of information and suggestion is that exact kind of influence that always goes from the school to the home, just as the effect of domestic science goes from the school to the home to change it and make it better, and just as the instrumentalities of kindergarten methods and of the best primary-school methods have gone from the school to the home, affecting not only younger children at home, but mothers and fathers as well. The day will come when the community at large, even the lower element of it, knowing something of sanitary law and sanitary appliances, will seek to know more and to understand better how to live; and the instrumentality thru which it shall be brought about is the public schools, allied with the educated portion of society.

REALIZING OUR FINAL AIM IN EDUCATION

BY SYLVESTER F. SCOVEL, PRESIDENT OF THE UNIVERSITY OF WOOSTER, O.

"Realizing Our Final Aim in Education" is, of course, logically sequent on having a final aim. This address should properly be preceded by another on "Character as Final Aim in Education." The discussion of our end or object is becoming a very frequent and familiar one, and I must be pardoned a word on that which is fundamental to this.

We are fortunate to have really found a final aim, since Aristotle could say as to the confusion then existing the following: "What, then, is education, and how are we to educate? For there is yet no agreement on the point. All men are not of the same opinion as to what the young should learn either with a view to perfection or to the best life. Nor is it agreed whether education is to aim at the development of the intellect or of the moral character. Nay more, from the ordinary standpoint the matter is quite confused, and it is not clear to anybody whether we are to train in what leads to virtue, in what is useful for ordinary life, or in absolute science. All these alternatives have their advocates."

And so far as I can judge from the able and scholarly paper of Professor Gordy, there yet seems to be uncertainty as to the end of education among us. There can be little dissent from his general postulate that the end of education will be determined for each individual by his conception of man: that Plato would educate for dialectic, intuitive power; Aristotle for the intellect's supremacy; certain religious teachers for the capacity to believe certain doctrines; Dr. Dewey solely for society; Herbartians for such "interest as would invariably impel the individual to certain kinds of conduct;" Davidson for "rational living" by the four elements of knowledge, discipline, cultivation of the emotions, and will-training.

While we must all heartily agree with the general conclusion of the valuable paper concerning the limits of genetic psychology, I do not share the uncertainty which it seems to convey concerning the final aim in education. It is not incomprehensible, because the main elements and outlines and meanings of human nature are not incomprehensible. The drift of the world's thought today is in the direction of the value of the man's nature as a moral being. And he is, therefore, in himself (and necessarily in his relations), as a moral being, the first end of his own education. There is no difficulty in unlocking a door with a master-key which fits all the wards; and the supremacy of the moral in man is that which brings all individuals, all society, and all history into harmony with the surrounding universe, and with the God who made it and is now immanent in it.

I may beg leave to add just here that I know of no religious view of man which ever found expression in an education so narrow as to be completed in man's belief of "certain doctrines." On the contrary, the world's education is an ethical progress toward an ethical end, driven by the sanctions of one divinely ordained and authoritative system. Creed and deed are never divorced in Christianity. This is abundantly proven by the history of civilization, and nowhere better exemplified than in America, where our education of every grade has been predominantly and almost universally Christian—and remains so today.

Moreover, it may be noted that Aristotle is by no means committed to the supremacy of the intellect. On the contrary, he holds that the moral conditions the intellect. Hear his words in the *Ethics:* "It is by the gradual perfection of the moral nature, and by this method only, that we are brought into that state in which the intellectual principle is able to act purely and uninterruptedly. The improvement of our moral and intellectual faculties will go on parallel to one another. Every evil habit conquered, every good habit formed, will remove an obstacle to the energy of the intellect and assist in invigorating its nature."

Parallel with this the noble utterance of Erasmus D. MacMaster (once president of Hanover and of Miami University, in Ohio): "Nothing, nothing, but the predominating influence of high moral rectitude as the governing power in man can give that enlargement and capacity to the intellect, that force of thought, that vigorous tone of sentiment, and that firmness and consistency, which are essential to the highest order of mind." (Hanover, 1844.)

There can be no controversy over the assertion that our view of the end to be sought in education will be determined by our view of the nature to be educated. That is simple common sense, and the foundation of all scientific inquiry into the lesser facts of our mental structure and history from childhood up. But the wonder is that there should be any controversy as to what the great leading, dominant, distinctive characteristic of our nature is. That fixed, the end of our education is fixed. There are many indications of this broad and deep view of our nature being held. John Stuart Mill says:

> Education includes whatever we do for ourselves, and whatever is done for us by others, for the express purpose of bringing us nearer to the perfection of our nature. In its largest acceptation it comprehends even the indirect effect produced on character and human faculties by things of which the direct purpose is different (e. g., laws, arts, government, industry, social life, physical environment).

The same broad view of man's nature and relations appears in the definition of education's aim as given in the charter of the Leland P. Stanford, Jr., University:

> The object is not only to give the student a technical education, fitting him alone for a successful business life, but it is to instill into his mind an appreciation of the blessings of this government, a reverence for its institutions, and a love of God and humanity, to the end he may go forth and by precept and example spread the great truths, by the light of which his fellow-men will be elevated and taught how to attain happiness in this world and in the life eternal.

There are implied our whole nature and our sublimest relations and the underlying truth that, character once made the appropriate end, conduct will be sure to follow. So Froebel: "Education consists in leading man as a thinking, intelligent being, growing into self-consciousness, to a pure and unsullied, conscious and free representation of the inner law of Divine Unity, and in teaching him ways and means thereto. . . . . The object of education is the realization of a faithful, pure, inviolate, and hence holy life."

For us the perplexity is over. Education is itself so great that only character is a target large enough for its final aim. But character is peerless. It is the sum of our moral attributes. It is greater than circumstance, as the underlying geometrical truth is greater than the chalk lines on the blackboard. It is the true measure of our worth, the standard of intrinsic human values, and of that judgment which this world is constantly making up, and which the next world will but complete and exhibit. Character is being, and it is nobler to be than either to have or to know. Character is the indispensable first need of man for himself, and the equally indispensable first requisite for every combination in which man must live — family, church, or state.

Every view of education which has made anything less than character its final aim has proven seriously defective. Materialism has endeavored in vain to destroy the connection between the two by denying our ability to form character, and making both mind and morals absolutely dependent on external conditions and antecedents. The unthinking multitude which regards "a living" as the end of an education is much more influential in preventing the accomplishment of the final aim; but civilization knows that merely a living is not all that man needs. And they who think of learning as the end of education are giving way to better things. Men must know how to manage what they learn. And even those who have striven to substitute power for learning, and talked long and earnestly about "leading out" the powers and faculties, are discovering that everlastingly leading out things is only to dissipate the power you create. Now the point of rest is sought. The point is demanded where power and learning, living and the physical basis of life, shall all be tributary to character; and where the man — thus to be formed — shall be made the chief end of all his education. The first defective view regards only the physical conditions of education; the second looks at the money in education; the third says the knowledge is the education; the fourth thinks of mental skill and discipline. All are seen on the instant of comparison to be far below the true view in dignity, in comprehensiveness, and in practical value. The view which makes character the end of education proposes to stop nowhere short of that which is highest and noblest in man. Education will not linger in the outer courts, it has a message to the king! The true view holds it to be well-nigh self-evident that the culture of the living powers is valueless (in the best sense of man's value), and even dangerous, if it be robbed of that which must go before it and come after it — the culture that gives the trained body and disciplined mind to the care and control of an educated conscience, and a wide-awake but well-controlled will, and a matured and symmetrical character.

The world began with its Tubal-Cains and Vulcans and Jubals and Mercurys to educate its fingers and its senses. But the very process made it avaricious, and knowledge systematized and written and transmitted became the temporary end of education. But the living powers are always more than any of their contents, and to educe them rose in its turn to the supreme place. But there was motion, and motion implies direction and end, and now the fair, full ideal begins to gain acceptance everywhere. The pendulum swings no more from body to mind, but rests on soul, into which (as a great center) flow all the forces from either side.

With this we are ready to proceed to that most natural of inquiries introduced by the announced theme. The object is a great one, but what opportunities are there in the ordinary course of school and college life for developing character? There is a savor of making bricks without straw in this high demand — confessedly the highest possible demand — made upon those the very condition of whose employment would seem to constrain them to do something else, and to do that with all their might and main.

The teachers say: "The points to be made in the intellectual plane are so definite and so difficult to attain that the moral plane remains practically inaccessible. So much time is given to the *technique* of education that we cannot do much in looking after the spirit of the matter. We are in a measure forced to be martinets in training; the *morale* of our troops must come from some other source. Examiners who test our work do not question on morals; and all work done in that line would not amount to a row of naughts, as to our advancement in the profession. Even parents do not send their children to us to be made good, but to be made smart. The first thing they will take care of themselves (tho we notice they fail in it sometimes). You demand the impossible. The theory is fine, but practice evaporates it."

The scholars and students say: "You tax us so much intellectually; 'give us a rest' on the morals. We have too many knotty problems to wrestle with to waste any time in speculating either about what we are going to be or ought to be; the main thing now for us is to know — and to know to the dot — and to know both outlines and details, and to show that we know in quick answers. We have too many Latin and square roots to grub to be looking away into the stellar spaces for large inspirations. We are here to learn arithmetic, and not behavior, and to get on in this world, not to get ready for another." And so on you shall hear in great variety, with many side voices of like tenor, from those who are afraid something Christian will be done in the schools, or from directors who are determined on the highest intellectual product at any cost, or from the natural restlessness and impatience of our American spirit. The point of unity in all the cries will be this: However desirable character-making may be, it is not feasible thru the ordinary processes of our educational institutions.

But for all this, while acknowledging frankly every difficulty in the case, I hope to show that in and thru our school and college work there lie abundant opportunities to form character of the completest and highest grade. The means, I dare to say, are ample, and the opportunities the very best the world affords. The opportunities are both direct and indirect. Along the line of immediate and daily duty lie these possibilities, and thick in all the interstices of busy educational intercourse are hidden a thousand more which may be developed by care and watchfulness.

And in this claim I have the gracious sense of defending your work and mine from the most damaging accusation ever cast upon our educational life, viz., that it does not and cannot make a high type of character.

Foreigners have openly made the charge, and there are those who urge it at home, and there are other thousands who are tremulously fearing that there may be some color for the charge, and beginning to wonder why we have not better generations as well as more highly educated ones.

To all, of all classes, we desire to make answer that teachers, and boards, and parents, have no defense to offer of any system of education which either prevents or fails in making character. For one, so convinced am I of the ample opportunities given us, and of the certainty of their improvement, on the one hand, and so profoundly convinced that no possible result can atone for the want of character-making power, that I am ready to say distinctly: If our system hinders or destroys character, or simply stands in place of another that can make character, then it may, can, should, and must go! You see, then, fellow-teachers and parents and patrons, where at least I land myself, if I fail to make it evident that there are very good — I might say sufficient — opportunities (if well improved) for character-making, in our educational processes.

1. To begin, then, with the simplest possible proposition. The formative period of character is the school and college period of life. Up to entrance, consciousness is but barely developed, and consecutive thought and philosophical memory are nearly unknown, and power to comprehend moral distinctions is exceedingly rudimentary. In such a state of case it cannot but be that the whole series of educational influences — the schoolroom, the recitation room, the examination days, the practice hours, and the playground — will be admirably situated to make character impressions. What more could be desired as to period? Earlier were of little use, and later of no use. Almost the whole formative period (I embrace, of course, from kindergarten to professional and technical school) is covered with the network of these influences. More waking time is spent under them by this nascent immortality, this potter's clay, this shooting-twig life, than under most other influences combined. The modern school idea, taken by and large, is immensely aggressive, and there are not wanting those who think that it creeps slowly toward Plato's *Ideal Republic* suggestion of stealing the children entirely and giving them over to the school-teachers. (See papers at Basel Evangelical Alliance in 1879.) These ceaseless hammer-strokes fall on metal thin enough to be battered into any shape the hammer will give it, and hard enough to retain the embossment forever. These influences in such a situation of things must either make character or spoil the material. The opportunities are boundless, and the responsibility is incalculable when you remember that, ere that handling ceases, the plasticity has gone forever! The time at which we work — common as the thought is — is the thing that underlies both our opportunity and our responsibility. We are carving in stone like that strange western variety which can be wrought with handsaws and chisels when first quarried, but once built hardens like granite.

Character-making lies pre-eminently in their domain whose work determines the future by oversweeping the present. What! fellow-teachers! No opportunities to make character between three and twenty-three? Then has spring no power to rule the summer's blossoming or to fructify the autumn.

2. A step closer, and we discover that the mere submission of this material to general methods must exercise an immense influence upon character. The school and college are the apostles of the common life. The toning down and subduing effects of the painter's blending brush all come this way. Here false individualism is checked, and the larger life is taught as it cannot be elsewhere. School and college life, as differing from the narrower life of home, has some lines of character to cultivate that are peculiarly its own, and without which a symmetrical character is hardly conceivable. Children and youth are sent to school and college for this very class of effects, just as smaller castings are put into boxes in Pittsburgh machine-shops and rolled about to knock the rough edges off. School and college life gives the first principles for social life, and furnishes the stepping-stones to much that lies farthest on in perfecting character.

There is no danger here, either, to a true individuality. The general methods are modified by special traits—as the one rain is absorbed by each plant thru the soil and atmosphere—according to its own nature. Variety is not destroyed, while a certain healthy uniformity is secured. There is only a just correction of a false individualism. It cannot but be that the submitting of each student to the same general methods will have a powerful effect in establishing general standards of right, in removing effects of injudicious parental partialities, and in enforcing respect for all who live under the same regulations. No longer is John mamma's darling, or papa's prospective candidate for president, but simply No. 79 of room No. 8; or A 1st, or B 2d. Here is the beginning of much more than is easily seen at first glance. Here is the way to the "moral unity" which has been such a desideratum in the recent French educational discussions and changes. Here is that force which makes so decidedly, both in school and army, against junkerdom and aristocracy in Germany. Even great traits of national character come hereout. Certainly the teacher who sits beside this polishing barrel and by no crank-turning, but by faithful administration, and even individual inspection, seeks to make the most of this power committed to him, is in a "coign of vantage" for character-making. It would be simple stupidity to deny this.

We may well add, then, the effect of general methods to the opportunities given us by the peculiar state of the material presented for manipulation. General methods are not mere economies; they are like the military methods which are essential to the safety and *morale* of the army and condition the military virtues.

3. And when we look more narrowly into the very subjects of study with which we are disposed to think the time is so exclusively to be spent as to preclude the moral work desired, we shall find that they possess character-making power in no inferior degree.

Let me note again, before entering upon this point, an opinion of one whose opinion I must always respect. Professor Gordy has said that "the Herbartian doctrine that the school course may be made a means of revealing moral ideas, and consequently a means of moral training, is not only false but pernicious." Let me put beside this that of a teacher in the Cincinnati Central High School, Professor Bishop, I think: "The exertion of moral force must find place in every recitation. Character-building is the real object. . . . . The ethical element must not be absent from anything taught. The teachers are ready and willing to make a noble response to this demand that they give greater prominence to the ethical element."

(1) First and chief among the subjects of study we must think of the philosophies, mental and moral, coming in their own time and way. That which teaches self-knowledge cannot fail to teach something of self-control. That which tells us what we ought to do must certainly bear firmly upon what ought to be. He is put into the peristyle of character's temple who is taught to reflect perseveringly upon the laws and activities of his own being. You have read, perhaps, President Gilman's admirable plea for philosophy as a force in this direction. Says he:

> It is by the study of the history of opinions, by the scrutiny of mental phenomena, and by the discussion of ethical principles, that religious and moral character is to be developed. . . . . The hours of reflection are redeemed from barrenness when they are pervaded by the perennial currents which flow from the lofty heights of philosophy and religion. . . . . Above other educational subjects in importance, stands philosophy, the exercise of reason upon those manifest and perplexing problems of existence which are as old as humanity and as new as the nineteenth century. For its place in education no substitute need apply. (*North American Review*, 1883, pp. 536, 537.)

And that which is true of other philosophy must certainly be true *a fortiori* of ethics. Can that be less than a powerful aid to a sincere teacher in making impressions for good that shall be as lasting as they are profound and accurate? To have the ground of morality fixed; to have the history of the world's progress and failures in morals described; and to have its relation to God (and God manifest in humanity) settled; to know something of the great executive, the will, and something of the philosophy of motive — all this (and there is more in ethics) must help those whose ambition it is to teach well. And he only teaches well who inculcates the right as the choicest of all knowledge, and the doing of it as the noblest possibility of our nature.

Allow me to recall a word from Professor Halleck's valuable paper:

> Observation of children has certainly contributed to the science of education something in regard to the teaching of morality. Such observation has shown that those who

try to teach morality by word of mouth waste their efforts. Morality concerns itself with action alone. Where there is no action there can be no morality. Children of ten receive more training in both thought and morals from their own games than from books.

But I beg leave to observe on this whole doctrine that there is nothing in the world which is so naturally and necessarily taught in the form of precept—"by word of mouth"—as morality. To this agrees our conscience with its categorical imperative. To this agrees the moral code of Sinai; and equally well its compression into two great commands to love. Moreover, we know that moral nature comes before moral action, and can be cultivated. The illustration only proved that some of the children on the playground had been well taught previously. And let me venture to put against this opinion that of Superintendent F. Louis Soldan, whose absence we all regret. As against the idea that training in moral character must be by concrete instances alone, he is reported as

opposed to the doctrine that you must not give an order to a little child without a lengthy explanation; simply doing makes morality a part of the child's being tending to habit. Silence, punctuality, regularity in attendance, have not much force, but they are forcible when they lead to purpose. Every school should be a source of purposes, the final end of which is morality as found in the institutions of man. *Ethical lessons* are given once a week in our schools, in place of the language lessons in the lower eight grades. These are told or given in adapted literature. They cover two points: rights of other children; duty to home and parents. The teachers have primary *texts on ethics*, to be able to present the work in an orderly way.

(2) And what of the classics? Were they not of old time called the "humanities," because they civilized people? And at this point of their influence they scarcely exceed the similar power of modern languages. What a broadening of consciousness as a whole race—experience flows into the mind and acquires a new language! How can we avoid the culture of our characters when we come by patient labor and minute study (the very nature of the process heightening the result) into sympathy with the classics in which the writers have expressed and enshrined their own characters? Learning thought we learn to think; studying models in literature we are drawn to imitation in inner and outer life.

(3) Then there is the history. Magnificent field for character-making, because the largest field of display for character already made! What is history but the play of individual, and occasionally of national, character? Without this element it is a dumb pageant, as gaudy and as empty as a Punch and Judy show—and much less amusing. How can history be taught without the sharpest analysis of motive and keenest scrutiny of conduct? How can the "world history" be the "world judgment" (according to Schiller's fine saying), unless taught as a tournament of character? And how can you teach it so and not *make* character?

(4) Then comes politics, or civics. It is erected upon history, but deals with history in the civic and national plane. Necessarily dignified

is it by the numbers in view, the permanency of its results, the width of its areas, and the sweep of its inductions. Lofty is the true political effect in character. *Here* is the birthplace of that intelligent patriotism we are all so anxious to create. Nothing can lie so near the interest of the state as the study of civics, because here all the fundamental traits of character are shown to be the very foundation stones of the state. The universal inquiry, "What makes the state?" can meet only one universal reply: "Men of opinion and a will; men whom the spoils of office cannot buy." Who can teach the constitution of the United States, with its proper historical setting, and not teach that? The teaching of political science (civics in all stages) must be followed by a conviction of the citizen's responsibility, a fine sense of social honor, and a strong sentiment in behalf of political purity, or it has been badly done. A product of this kind is the imperative demand of our times. "If the colleges and schools and public lectures and the press do not bring to the front a superior class of young men, having a superior standard of honor, they do not deserve to be praised for aught that they do for the body politic. Unless there is a more exalted code and creed of political ethics, practically and potentially introduced, there will be great disasters come upon the republic ere many years roll around. Our severest trials are yet to come." (From a metropolitan journal.) Can any teacher doubt whether charactcr is the demand of the country? Hear Cowper's lamentation just after his eulogy of English freedom:

> Do I forebode impossible events? . . . .
> Heaven grant I may;
> But the age of virtuous politics is past, ...
> *For when was public virtue to be found*
> *Where private was not?*

In teaching civics, can any intelligent teacher lose sight of the commanding motive that our whole magnificent system of free education is a moving evidence of the *love* the state has for its children? Can he help inserting here the noble *ideal* which is so necessary to elevate the actual? What a glorious opportunity to teach all who receive this education to cherish the deepest and most affectionate respect for their commonwealth and country, and for the laws and honor and good name of all the institutions of both! What is the best gift the schools can give the country? Beyond all question it is: a generation of character. Hear Lowell:

> You who hold dear this self-conceived ideal,
> Whose faith and works alone can make it real;
> Bring all your fairest gifts to deck her shrine,
> Who lifts our lives away from mine and thine,
> And feeds them at the core with manhood more divine.
> . . . . When all have done their utmost, surely he
> Hath given the best who gives a *character*

Erect and constant, which nor any shock
Of loosened elements, nor the forceful sea
Of flowing or of ebbing fates, can stir
From its deep bases in the living rock
Of ancient Manhood's sweet security.

There, sirs! even poetic insight will never go beyond this high conception of our greatest American author; and to realize that character on the civic side is our duty and privilege while we teach civics.

(5) Then think of the character-making power of literature. Fiction is widest here; and in how many ways the characters of fiction are carried into our educational life thru allusions, recitations, literary references, etc.! I believe too much use is made of it; and any use must be powerful, considering the vivid imagination of youth. Then come the essayists. How many of them deal with character and teach us to be critics of it, whether we will or not—all of them, indeed, that are worth using as educational material. The literature of our "readers" in school life sets the tone of the moral thinking and feeling of each generation. Let me make the people's readers rather, even, than their songs! And remember that, in the literary exercises we require thruout the whole process of an education, we are forming the power to have "opinions and a will"—i. e., to think sharply and feel deeply about that of which we think, as well as the power to express thought and feeling. What an amazing power is this that the pupil is expected to have and express correct moral ideas and to admire and praise only the virtues! How far-reaching the implication of such an expectancy! Even in elocution one must be taught to feel and express genuine sentiments. "In a certain sense, training toward naturalness is moral training of a high order. It is inculcating honesty." (Marg. T. Sutherland, *Ohio Educational Monthly*, September, 1888, p. 448.)

(6) Even those studies which may be classed under the general title æsthetics will be found fruitful in character-making power. Can anyone doubt that the training of the more delicate perceptions of the senses, and the opening thus of large areas to the otherwise insensitive and unperceiving soul, is a great general force in raising those to be educated to a plane higher than the coarser instincts? Could we not reform the world easier if there were no low tastes to be encountered? Is it not certain that music and art refine and elevate, when not intermingled with extraneous and interrupting tendencies? Who fails to see that art is one of the grandest teachers of heroism? Storied faces awaken the latent high ambition of generous youth—as the monuments in the Ceramicus would not let Themistocles sleep. Banish all that is merely frivolous in music and all that is impure in art, and see how inspiring and ennobling they will become. Handicapped as they now are, besmeared with the flesh and besmirched with sin as they are, yet how much of every larger and fuller life comes in thru these blessed eye and ear gates, and how thrilling

the contact of absorbing soul and creative genius all along the glowing lines! Oh, for the day when the full educational powers of the æsthetic —drawn away from every ridiculous and demeaning association—shall be developed! And the time will come when the finer and more sensitive lines of character will be as much expected from æsthetic culture as the solid buttresses of conviction and will are now expected from philosophy and ethics.

(7) And surely there can be no doubt about the sturdy elements of character toward which mathematics forces us. If philosophy stimulates longing to be, and classical literature softens by elevated intercourse with lofty minds, then mathematics may claim to play spinal column to this order of things. See its rare power to concentrate attention and teach self-control; to clear the mental vision and thus prevent confusion of moral distinctions; to train the mind to keen perceptions of the subtle links of sustained reasoning, and thus prepare it for applying great principles to smaller incidents; to strengthen the judgment, and thus steady the man's practice whose principles are right. Nothing can give certainty and definiteness to all vital operations like mathematics.

(8) And, of course, in this day we cannot forget natural science. That has a no less honorable place. From the beginning it illuminates man's dwelling place, and man can never be the same when he dwells in light. How marvelously science shows us that, below us and above us, within us and far beyond us, which makes the world too sacred a place either for sin or trifling! How dares a man be lazy in a world where everything from a glacier to the wing of a humming-bird is busy? How can a man be selfish where everything, from his own body to the sun, is incessantly imparting itself to something else? I make no doubt that Spencer is right (tho by no means original) in the claim (*Education*, p. 88) that science "cultivates the judgment, and stimulates a just spirit of independence, and awakens perseverance, and is a powerful aid to sincerity." I am ready to say with Huxley that it tends to produce "honest receptivity and a willingness to abandon all preconceived notions, if they contradict the truth." One of our own college presidents (Finley) has said that "The chief value of science teaching is that it is a training in telling the truth." Here is the place to give credit to that best possible definition of education (from the side of agnosticism) given by Huxley: "What I mean by an education is learning the rules of this mighty game (that which nature, unseen, but just and patient, wages with us). In other words, education is the instruction of the intellect in the laws of nature and the fashioning of the affections and of the will into harmony with those laws." But "fashioning the affections and the will" is just character-making. Indeed, there is a cultivation of all the more delicate and refined feelings inseparable from education in physical science (if there be no untoward or contrary influence from without to mar the impression).

Humility comes by seeing the greatness and intricacy of nature. Every object becomes so much more to the scientist that his world is not only larger but infinitely fuller than his to whom "a yellow primrose a primrose is, and nothing more." Majesty beams upon him in all the greater movements, and quick interest gleams out for him from every petal of the flower and even every scale of the fish. How can a little man help being humble in the big world, as science discloses it? Reverence for nature, for man as a distinguished fraction of nature, and for God as the author of nature, must increase as the knowledge increases (unless again some exterior influence or moral disturbance interfere). The higher emotions are excited by all the dealing with natural marvels, and wonder leads to adoration, and adoration is kin to purity. Does anyone doubt at all that, if scientific recreations ever could become universal, they would banish the theater and close the saloon, and they might even civilize football?

The attainment of humility by wrestling with the facts of science and the generalizations of intellectual giants is both possible and valuable. No man ought to come thru a course like that of our high schools without being able to say a hearty and intellectual "amen" to the apostolic dictum: "He that thinketh he knoweth anything, knoweth nothing yet as he ought to know." The student who goes out without having learned humility is sure to expose raw surfaces, and will be punished accordingly.

(9) And now appear the character-making elements in the new branch of the effects of alcohol. We all know that they are not physical only, not mental only, but moral. And we shall get the very opportunity to teach the moral lesson against intemperance by beginning with the physical effects and showing where these terminate in moral wreck. Admirable here are Miss Willard's words: "The geography of character is a branch sure to be taught some day in the public schools. But character is bounded on the north by sobriety, on the east by integrity, on the west by industry, and on the south by gentleness." And then she triumphantly shows that sobriety is the condition of the other three. Teach that.

(10) Sociology. And what of sociology—the coming science which shall be (when it comes) a *scientia scientiarum*, and which (while it is coming) is tinging everything and subordinating everything (even to pure mathematics)? How can that be taught apart from the noblest life lessons? Its very texture is moral, because it studies moral beings in their moral relations, and religious beings in their religious relations. Its first questions (and its last ones) are about human duties. That "no man liveth and no man dieth to himself;" that "our neighbors" must be loved as we love ourselves; that we must do good where we would receive good; that justice is close akin to generosity, and generosity to self-sacrifice, and self-sacrifice to piety—are its primal conceptions. You

cannot teach it and not form character. One only needs to refer to Professor Mark Baldwin's recent volume on *Mental Development in Social and Ethical Interpretations* to see how thoroly interplicated the individual and society must be. Whether, therefore, your morality be natural or revealed, you must teach it as the child develops into the man, and as the man prepares to take his place among other men. If you can make character at all, it is in connection with such considerations. The same conclusion is reached by way of Vincent's *The Social Mind and Education*. "When the sciences are called upon to give a teleological reason for their existence, they must give a social object as a reason for their being. . . . . Social-philosophy is to be put at the apex of all science, and an ethical value is to be assigned it, rather than a logical value." (Hyslop's review of Vincent.) It is plain that the putting together of *The Social Mind and Education* shows a wider solidarity-consciousness than was ever before experienced in the world's history. The social side of character and conduct are coming into ever greater and greater prominence. "Actions which once affected no one but the subject of them, or were thought not to do so, are now thought to be necessary incidents in the weal and woe of our neighbors, and are catalogued as social instead of individual" (Hyslop). What an opportunity, then, as well as a responsibility! No wonder it is proposed to lay out a curriculum making the fourth and highest class of subjects to consist of the social and ethical sciences. How impossible to teach with this in view all along the course and not make character!

For the training to politeness (which is a very positive social virtue, and, when genuine, is thoroly altruistic), which is needed by pupils of all classes, our schools are full of opportunities. Half their pleasure and their order and good-natured atmosphere are dependent on this. The polite person treats others as tho they were "perfectly ideal persons." "Politeness is only the form of altruism. Morality and religion are the substance of it" (says Harris in comment upon Rosenkranz). Every teaching of politeness is full of social virtue, and builds moral character of a high order, and that on a religious basis. In this matter of teaching the social virtues the school is supreme. The home is too limited; the church is also too limited, and besides has special spiritual duty; the law comes too late for full effect, tho operative in a sense all the way thru. *The school* is the center of power for the propagation of the social virtues. Trust can be taught here, largely and constantly, and in ever-widening circles. Distrust can be taught, too, as a matter of caution and watchfulness, and is equally necessary—but covers a small area. Common methods make common human nature precious in the sight of all who pass under them. Democratic regard for all merges into the deeper sentiment of honoring all. The only point where our social classes can be woven together is in our public-school classes. Here we have them as the sailor has the end of the rope he would splice—frayed out in the strands of youth that go to make up the social cords. Nothing but the schools can give us solidarity.

This much, then, for the subjects of study as furnishing opportunities to the teacher desirous to form character. Out of each and all of them—and out of every particular under the general classification, philosophical, classical, mathematical, scientific, æsthetic, historical, sociological—spring numberless appeals to judgment and provocatives of feeling; and in all of them principles are to be assumed and appealed to, or elaborated and established, which guide in opinion and conduct. Can it be that from third year to twenty-third pupils can be kept in living and real contact with such subjects without in all probability having all great points in life and belief and character brought before them, and without, in the process as a whole, receiving very decided and ineradicable impressions?

4. It is now but a half step onward to call up those modifications of character which pupils must experience by intercourse with each other. The special directions of this discipline of interaction immediately reveal themselves. No child remains the same after the first week of school, and no graduate leaves the professional school without feeling the touch of those he has been nearest to. The good will acquire patience, will learn to exercise consideration, will grow in respect for talent, will increase in sympathy, and will be sensible of a rising desire to excel. The bad, as everywhere else, will either approximate the good, or go the other way and finally go out. One or the other result, and in various degrees, is sure to be discovered. Sometimes we fear measles and other things; but moral contacts in school life are a deal more important because continuous and often without visible external symptoms.

There are numberless ways for the good influences to become operative. The playground and the gymnasium show finely how the physical and the moral edges intersect. Here and in the military drill and organization there is a school of character. It is here that pupils learn to despise indolence. Here they discover that enthusiasm is indispensable, but must be restrained and tempered by judgment and aided by patiently acquired skill. Here the boys learn to take hold and do things. Here, too, one must be scrupulously fair to every fellow-contestant or be black-balled in the severe but honest public sentiment of the little community. Honest sweat is seen to be a condition of high health, and that again is conditioned upon a total relinquishment of self-dandling. Here, too, is learned that sovereign lesson that healthy bodies are most likely to be holy ones, and that vice weakens and withers wherever it touches. How well Tom Brown at Rugby and Oxford depicts the moral education of the school and college sports!

Then in the mental gymnastics of the literary societies the same forces are exerted from a different angle. Self-possession, so near of kin to self-control, must be learned. Honest exercise of critical power, "nothing extenuating nor setting down aught in malice," is an admirable way to be forced into seeing our own faults—a very first step to symmetrical character. Here faithfulness to official and representative trusts is inculcated. Justice in weighing opinions and facts must be acquired; and fair means of dealing with opponents must be learned.

Nor is there wanting discipline of character in school and college fun; of which I have only to speak lovingly. I do not mean thieving (which is the right name for depredations on chicken fixings and melon patches), nor mischief that means misery to man or beast, nor hazing above all (that abomination of the eastern colleges which I frankly believe the western college boy wouldn't endure for a moment). No! *Not* these things, which are low and cowardly; but I mean the witty repartee, the shrewd criticism (the "anonymous box," as we used to call it, whose revelations were as free and pointed as the original "pasquinades" of Rome), and all such sore chastisements of the immature and vealy and pretentious and lackadaisical and over-sentimental. It is somewhere in most of us, and likely to be sprouting luxuriously between the last years of high school and the sophomore year of college. Of all that discipline of interaction I have only to speak lovingly. May its "tribe increase"! May the shadow never grow less of that wholesome horror of the good-natured and well-deserved ridicule of our school- and college-mates! It is the world's way of correcting faults without the sting of the world's bitterness, and applied just at the right time. He that heeds this prophylactic will escape much severer medicine by and by. And how many a man I have seen ripen under it visibly day by day—ripening as an apple does, with many blushes, and yet the fairer for it after all!

Who can tell how much of our own lives has been lived thru forces set in motion by our schoolmates? Rank is to be found among our schoolmates by our character. Rank is to be maintained by our character. Pretension is soon shorn of its locks, and vanity fares ill, and money goes for nothing in the sharp, quick perceptions, and plump and prompt criticisms, of school life. Many—the most—are very much improved by it. And with all this—the spirit and temper and public opinion of the school—the teacher has very much to do. If teachers are quick, clear, and pronounced about moral distinctions, sensitive to meanness, and generous in approving nobleness, that public opinion will be high. If they are careless and slovenly and vacillating in these things, the tone will set itself on some lower key; and if they themselves be mean, unreliable, selfish, and bad, the tone will go lower still. Here is opportunity of the grandest description. The possibility of determining the result of the influences which the scholars exert upon each other presents an object of most eager ambition, and of most holy desire, to every real teacher.

5. Pass now to the actual intellectual exertions of the scholar as a school of character. Nothing can be clearer. Not only does character appear in the intellectual palæstra, but it is made there. Within the circle of these strivings the pupil must acquire (as conditions of the slightest success) something of four great virtues: self-control, determined purpose, patience, and perseverance. The very brightest faculties cannot dispense with these without ending where young Sir Tristam Fickle did in the rebuke of the older Fickle: "Don't talk to me of versatility; let me see a little steadiness." This discipline of exertion is toward mental integrity (that superb grace of "truth in work" about which Ruskin so justly raves). It is toward nervous vigor and solid backbone and thoro manliness in attacking difficult things. It is directly in the line of loyal obedience to an ideal of perfection. This highest of forces in character-making must be cultivated daily and hourly in every school where there is a teacher that is anything better than a stick. Morning, noon, and afternoon, ceaselessly as the falling of the light upon the page of the text-book, there fall upon the forming character the motives and appeals (higher and lower) which would move him in the direction of these four capital traits: self-control, determined purpose, patience, and perseverance. These are moral traits. They are signally important virtues. They are the determining virtues, because they guard against temptations on the one side, and take hold upon the activities of life on the other. They have the grip of a clinched nail. You cannot break a man's hold on a worthy thing, who has been trained in the schoolroom to these grand characteristics. And these are virtues which can only come in and by work, and may come, certainly, as well by the work of the school as by any other work. Nay! That is only half the truth. The teacher's business is to see that they do come in and by the school work, so that the workers shall not only be able to handle arithmetic well, but shall be trained to such habits and by such motives of faithful work that they can no more fail so to work as men and women than they could fail in simple multiplication. Why not? Do we all ridicule the idea of calling that education which leaves the nerveless youth at the end of it with only the knowledge of his books, and no mental power to work independently on new materials? Then let us also ridicule that style of education which has kept a child at work from three to twenty-three without even inducting him into the great working virtues, and supplying him with an unfailing certain reserve of workful character.

And as the pupils work, the teacher's great opportunity evolves. Now is the time to teach *why* work is to be done at all; now is the time to inculcate an honest shame at any kind of shambling and shamming; now is the time to make apparent the nobler motives to study which shall become in the end regnant motives to the noblest living; now is the time to increase ardor while steadying it, and to help the scholar taste the just rewards of diligence without being intoxicated by them. There is, in fact, scarcely a limit to the teacher's influence at this point. To what cheerful resoluteness, to what indomitable pluck, to what persistency of purpose, to what repeated triumphs of patience, may not a patient and sensitive teacher help a struggling student! And what so valuable a life-possession as these virtues! Even should the lacunæ left in his information be many, and the mists enveloping the calculus thick, and his construing power for Greek be feeble—the youth that goes out to life armed with these virtues will as surely succeed as the sun will rise. Effort, well-directed and sustained effort, is almost the sole condition of success. What can, by any possibility, be of more importance than the training of a generation to the working virtues? Cannot a teacher teach that every day and between the lines of every lesson? How can an earnest teacher help teaching it? Next to energy, persistence is a life force, and stick-to-itiveness is the cardinal virtue of the schoolroom; continued even occasionally over recess hours toward the setting sun, when the weary teacher would rather stick to something else. The life of thousands fails for want of persistence. What joy of exertion and habits of industry may not be taught! Intellectual indolence provides a "primrose path to stagnant pools, to an Arcadia of thistles, and a paradise of mud." But the faithful, stimulative teacher keeps the boys and girls out of the mud. What absolute self-control may be developed by study—especially in that valuable power, concentration! The temptations to superficiality and discursiveness and general molluscousness are thrown around every student. There are so many ways of getting on in things without getting to the bottom of anything. And there are so many things, and a general acquaintance with the merest surface of a multitude is so much esteemed among men, that it becomes one of the noblest offices of the teacher to counteract the temptation and the tendency, and to teach self-control, selection, and concentration. How easily a boy can be made a botanist who sees amid a millionfold forest only the species he is studying! Impulse is made less and less the master, and selection becomes more and more easy.

"Mark," says Spencer, "the importance of the moral culture which this constant self-control involves. Courage in attacking difficulties, patient concentration of the attention, perseverance through failures—these are the characteristics which after-life especially requires, and these are characteristics which this system of making the mind work for its food specially produces."

See, then, the glory of the teacher's opportunities in this direction. Incidental to, but inseparable from, every task of the schoolroom there is the possible culture of those very traits which are most desirable in the future citizen, the educated artisan, the professional man, or even in the politician, or that somewhat as yet undefined, but certainly glorious creature, the "coming woman." We must all agree that it is not the knowledge of the three R's that comforts the world with the hope of ideal inhabitants, but the certainty that the generations can be educated into doing the work appointed them in a truthful, vigorous, thoughtful, patient, and persistent way. Not for one class, but for all classes, the world is a work-a-day world, and they only deserve its sabbaths who do their tasks well and to the end with all the power there is in them. Therefore the guide and director and stimulator of the intellectual exertions, by which alone the working virtues can be learned, stands very, very close to the best of the world. Can such opportunities be overlooked or forgotten? The very comfort of the teacher urges to this education in the working virtues. And they who come later in the course are intensely obliged to those who hand along the line from the earlier school life a generation highly developed in these virtues. And the world, to prepare for which is our duty and privilege, will be the more obliged to us all for every additional increment of character of this kind which we impart to those we pass under our care. And, most of all, those whom we train to right methods and motives of exertion and to character that cannot but work well and easily, will rise up and call us blessed.

6. The discipline of school life no one will be disposed to deny a place in character-making thru various methods. It has a flavor of authority, but relies largely upon conscience and honor, and this brings at once to the front the real protectors of character for the lifetime. It sets the currents of self-inspection and self-judging flowing from the soul into action constantly, and thus, when the standard is pure, secures the moral health. In school discipline how great the teacher's encouragement becomes!

> "Friend call me good: paint the fair picture still,
> *I shall grow like it:* with an earnest will
> I'll copy the fair draught in every line
> From your dear hand, till I have made it mine."

The end and aim of discipline is not repressive, but educative. Studying from real motives and acting right from conscience are the ideals, and these cannot but end in a wise and cautious, but determined independence. This cautious independence will certainly be the fruit of faithful study under the direction of superior minds; for the fresh contact of real, good, sound heads and hearts with the old, old subjects is always striking out new sparks (as any honest teacher will tell you), and the individuality of each class is marked; while, on the other hand, the prompt and frequent corrections of false conclusions and of hasty generalizations and rash judgments teach to make haste slowly. There are no better opportunities in life for such attainments.

The school discipline teaches respect for others, promotes habits of self-restraint and order, demands self-recollection and thoughtfulness, notes and forgives, and then notes and punishes a wrong; and thus becomes an admirable force to character.

The discipline of college authorities is, of course, graver, but no less effective in its place. It represents to nascent character the far-away dread which the little-used rod had in the well-ordered family, and the public laws and prisons are to have in after-life. But there it stands, and now and then (sad-faced and slow-paced, reluctant, but firm) it steps out of concealment, and a blow falls upon the guilty; the hush when the excitement is over that follows genuine and wise discipline is proof of its permanent power. And with the really wayward how healthful and strong is that mingling of parental care in the faculty, leaning back upon parental confidence in the family, and calling for the exercise in both of all that is deepest and truest in the best hearts when they deal with erring tendencies in the young!

I do not believe in the average evil tendencies of school and college life; but up to and beyond the average, when there is true-hearted and wise discipline, the school and the college make their men as well as teach them. Discipline in the school helps to fit future parents for their disciplinary functions in the nursery and home. How easy to learn the lessons now of self-control, of correcting in love, of generous approval; of judicious over-looking; of thoro impartiality and skillful adjustment of penalty to the offense, so as to make the offense (and not the authority) the creator of the sufferings; of wise variation of general rules for special temptations, etc.! It is not too much to say at this point that a race of perfect teachers would soon make a race of parents far better able to deal with the complicated task of parental government. To test the substantial unity between the two departments of life, ask yourselves when, if ever, you saw a mother who had been a school-teacher fail of being a good one. And let any parents here recall how often in the discipline of home the looks and tones and regrets and loving firmness of the best teachers of your own youth came back for guidance and imitation. The discipline of the schoolroom, as it is, mightily helps to save the nation from anarchy!

7. Scarcely do we need to claim character-making power for the daily intercourse of pupils and teachers in the class-room. Here we have the very thing—we have character making character. The opportunities are numberless, if they are but fairly recognized, to freight each day's intercourse with this deeper interest, and make them all subservient to moral development. Character in the teacher must be tied upon the need of it in the pupil. Difficult! Certainly; but so is everything good in this wicked world. And the difficulty can be overcome. The knot intertwining two characters must be done by shreds, as the sailors splice. Thus—

(1) By an occasional and dextrous questioning.

(2) By avoiding the appearance of considering it a task.

(3) By finding ways out of incidents into principles, and from principles into Scripture, and up to God.

(4) By gentle but constant stimulus to higher views and efforts at grander attainments. Push them up in the ascent. "*En avant, Messieurs!*"

(5) By intimate sympathy with the good and true in history. The teacher's love for the noble must be such as to show that character is more than station or wealth. Toadyism or tuft-hunting is fearful in a teacher. He must be a living example of how false Pope's lines are:

> 'Tis from high life, high character is drawn,
> A saint in crape is twice a saint in lawn.

How easily he can show, on the other hand, that many men are geodes—rough outside, sparkling crystal within! How easily a teacher's love of liberty becomes evident, and his love of purity, and of the heroic, etc.! His own character will tell as he selects and emphasizes particular traits, from every example given, and especially as he praises or blames.

(6) The teacher is likely to give the ideal conception of character to the pupil in traits and in symmetry, in part and whole. And this cannot but be of the first importance. A judgment *in thesi* carries often the greatest weight when the actual case occurs beyond the teacher's vision.

(7) The teacher's own character must show enthusiasm for character. Thus it shall win to the true view of life as against mammonism. "Every man is willing," says Ruskin, "to be a bedizened corpse (after the Scythian custom) who desires to advance in life without knowing what life is; who means that he is to get only more horses and more footmen, and more fortune and more public honor, and not more personal soul! He only is advancing in life whose heart is getting softer, whose blood warmer, whose brain quicker, whose spirit is entering into living peace. . . . . And the men who have this life in them are the true lords and kings of the earth—they and they only."

(8) The education of conscience in the intercourse of teacher and pupil is unavoidable, and is a most important element. This is to be done both by conduct and by instruction. Much of the success of the best teachers depends upon their skill in educating the conscience. For thus they secure the greatest amount of work, with the least friction, and the most love! The atmosphere of truth and sincerity in a school, coming from the teacher and visible in all the arrangements, is the very matrix of everything good in character.

Perhaps, then, the greatest power of all is found in the insensible but constant, the unmentioned but powerful, force of the teacher's own character in forming the pupil. The self-control, the patience, the entire sincerity and truthfulness, the noble aspirations, the strict justice, the proved impartiality to poor and rich, smart and dull, as they are visible in the teacher's conduct, make the deepest impression of all. There is no sphere that calls for more of character than the schoolroom. Everything combines to make the teacher's character impressive. He comes to a mind in its best frame. His (or her) mental power seems that of a mental giant to the tyro at picking out crabbed sentences, and crocheting the thread of argument into a demonstration, or picking up by bits the broken sentences and sums. The teacher is next the parent, and sometimes higher, in the child's reverence, because we all (and always) respect power. Many a child's character is corrected at school, which would have been ruined at home, by meeting a richer and fuller and nobler character in the teacher. Think of the city schools and the city shoals of children, with what all know of the home life of thousands of them. Pupils' models, teachers ought to be, and such they always are, more or less, in proportion to individual magnetism. Dean Stanley said that "the greatest of all educational difficulties, and also the solution of all educational difficulties, was to be found in connection with the characters and capacities of those who were sent out as teachers. The deepest impressions carried from childhood into manhood were impressions not only of what had been taught, but of the manner in which the instruction had been given."

The teacher's example goes a long way down. Truth is honored. Patience is emulated. Love is returned. Reverence for God and the good is instilled. Self-control is mastered. Perseverance is taken on. The soul of a pupil expands beside a thoroly trusted and admired teacher, as sympathetic ink comes out before the fire. Examples abound. Socrates' impression was that of an "archetypal personality." The narrative of Xenophon is "nothing but an abstract of his inward character." "His philosophy is his mode of action as an individual; his life and doctrines cannot be separated." (Schwegler's *History of Philosophy*, pp. 62, 63.)

The whole modern world knows of Arnold. All the world honors Pestalozzi. New England can never forget Samuel Taylor. Ohio will always cherish McGuffey's memory and MacMaster's. Every school and college has its traditions of great teachers, impressive by character.

This it is that tells everywhere. Men find it easy to disbelieve what any man utters when they do not believe in the man. It is significant that Benjamin Franklin says of himself: "It was because of my well-known integrity of character that I had so much weight with my fellow-citizens. I was but a bad speaker, never eloquent, subject to much hesitation in my choice of words, hardly correct often in my language, and yet I generally carried my point."

The teacher represents the community as he represents the parent. He must fit the child for a place in the community; must do it by "all resources of knowledge," and "by a type of character which represents as closely as possible the highest moral progress yet attained by man." (Sulley, *Teacher's Handbook of Psychology*, p. 63.) In the transmission of character from generation to generation, where is there a more visible instrumentality than the influence exercised by the teachers of the young? Yankee character and Yankee schoolmasters left their impress all along our chain of great lakes. The Yankee schoolmistress was feared at the South so long as they feared the truth. Character is sure to evoke character. So Lowell has it:

> Be noble, and the nobleness that lies
> In other men, sleeping, but never dead,
> Will rise in majesty to meet thine own. (*Sonnet 4.*)

8. And to all these opportunities there must be added this—that thruout the school life character-making may be furthered by the use of that great store of commands and precepts and standard illustrations of character which are furnished in the Sacred Scriptures. These may not only be *read* daily, but remembered in allusions and explanations constantly. The definitions of right and wrong thence derived come to the awakening conscience with authority. The Scriptures can never be displaced as the aptest and clearest and most varied and most attractive magazine of materials ready for use in forming character. They are ethical to the core, and filled with everything we wish to realize in the youth under our care. For this reason Huxley would not tolerate their exclusion from the schools of England, tho he would not admit their inspiration. Having the Bible at hand adds incalculably to the character-making power of any school.

9. And then, to close all, there must be noticed the extra-class hours of confidence and advice which the teacher's relation to the pupil makes so appropriate and so useful. Many a time a word spoken in this "coign of vantage" has saved eyes from tears and feet from falling. There can be no limit given here, and scarcely a hint needs to be given to earnest teachers, who hate mere perfunctory work. The impossible need not be expected in order to be assured that to the teacher who has understood the need of individual influence as the proper complement to common methods there will come endless opportunities, which may be used to most important results, in this out-of-school intercourse. Thus he becomes "the guide, counselor, and confidential friend" of many a one at the period of "unstable equilibrium," when such a friend cannot elsewhere be found.

Conclusion.—Ample, then, in every sense are the opportunities for the formation of character in and by the course of education. They are sufficient to supplement all other good and gracious influences, and deserve the rank which the saintly George Herbert gives them:

> Lord, with what care hast Thou begirt us round:
> Parents first season us; then school-masters
> Deliver us to law; then send us bound
> To rules of reason, holy messengers,
> Pulpits, and Sundays.

A moment's recapitulation must certify this amplitude. We have the best *time* and the power of general *methods* with which to begin. Every *subject* of study has its own molding power ready to be used. The interaction of pupils is an unceasing influence which may be largely directed for the highest good. The scholar's own mental exertions give us the opportunity to instill the great working virtues, and inner, vital action is begun. The discipline of school life aids, by outer action, its own pressure. Then follows the daily superaction of the teacher's character. This can be made more effective by appeal to the authority and love of God as shown in his word. And all may be aided by an out-of-school intercourse of special value.

Here are opportunities enough to mellow and mold and save where other good influences have been deficient. Enough to send out purest streams with every class that shall everywhere make glad the moral wastes of our day. Much is done, and more may be done. It is impossible for me to think of any really desirable trait of which the attainment may not be begun, and to which there is lacking some incitement, within the circle of school and college life. What a list of them!

Courage, Heroism, Self-respect, Ambition, Hopefulness,
Sympathy, Honor, Humility, Conscientiousness, Truthfulness.
Love, Reverence, Decision, Self-reliance,

And as long a list of faults of character may be corrected:

Vanity, Fickleness, Incompleteness, Dishonesty,
Laziness, Superficiality, Low ideals, Feebleness of purpose, etc.

So sacred and high are the possibilities when you consider things in their essence and reality, and not in their forms, that I can scarcely draw the line between the day school and the Sunday school in the mission of making character; and the teacher becomes at least an associate pastor. (Such sympathetic relations are, in truth, found in Protestant Germany as well as in Catholic France.) Who has a broader field, or rarer seed, or larger opportunities to sow? And how much of the harvest that is sometimes counted (in the short-sightedness that sees only the last instrumentality) to the Sunday-school teacher or the pastor is set down above (where the end and the beginning are never separated) to the care and drill and conscience and character of the faithful day-school teacher?

But with such opportunities, what foes we have to encounter! Every bad social influence somewhere shows in the schoolroom. A teacher can tell whether a circus has been in town. When the skating-rink craze went over the land, some teachers said: "The rinks must close, or we must." Saloons, in their steady demoralization, pursue our youth. Tobacco and tobacco pictures are desolating. The secret diffusion of corrupt literature it is almost impossible to check. Some forms of dancing and the theater are known to demoralize. And all go straight to the youth. All expect their victims there, and, alas! find them there. No superintendent can look thru the ranks without seeing the touch of all these things, sometimes complicated by heredity and often so reinforced by circumstances that escape seems next to impossible.

With the opportunity there comes this appeal to help against the foes. Many voices — and tender and powerful ones — are pleading. This young, innocent, fair life, so wonderful in its present, so inconceivably important in its future, utters its own plea. It says with tones that need no articulation — as the silent respirations of the babe you watch in the cradle do — "Care for me! Keep the wolves away."

Mothers and fathers come seeking your aid, with tenderest solicitude. Pastors and Sunday-school teachers come, hoping that what is done on the Sabbath will not be hindered, but helped, during the week. The state stands waiting to know the character of the generation into the hands of which all the common interests are so soon to pass. What teacher can fail to feel the tremendous responsibility which lies upon the schools? We must meet it, as it only can be met, by making the most, thru utmost effort and attention, of the magnificent opportunities for character-building furnished in school life. Open eyes to see; intelligent effort to use; unremitting patience to wait; firm handling and firm trust in God — all will be needed, and all are demands of the situation. The duty of the state to protect the children of the public school is perfectly clear. The children are invited and compelled to come in. To allow poisoned air to come in with them, or germs of communicable disease, is criminal negligence of the 15,000,000 in our schools. Children from unclean homes should be excluded. True. And truer still for moral pollution, and true from the compassion side as well as from the prophylactic side, or the general welfare side of government. See, then, fellow-teachers, the great compact between the state and the schools. The excluding power of the school is a method of realizing our final aim. This excluding power by state law must be met within by elimination of evil and the formation of character. And certainly it is to be remembered that character is not formed nor faults corrected in a day. Stone upon stone, and, before that, blow upon blow to fit each stone for its place; one impression on another at the same place; line upon line, and precept upon precept — thus is character made. Every day something.

Nor is your character-building in school done alone by direct and intended efforts. Impressions are sometimes deepest when least observed. The unconscious deeds impress others. Omissions as well as commissions count in this reckoning. The power of a teacher lies much in the very fact that culture in character lies alongside his work rather than in it. Side-lights sometimes are best lights. Things injected penetrate deeper. Indirections are often more powerful than right lines. The bow drawn at a venture pierces between the joints of the harness. A truth just seen emerging from the facts of a lesson will take both pupil and teacher by surprise, and will therefore adhere.

Were I permitted to give counsels, they would be such as these: Invent methods to make the most of these opportunities (as you invent methods of teaching geography). Write text-books of instruction to refer to from time to time (not to absorb the spirit of the work). Write professional books on the subject. Study this matter in the institutes. Read biographies of the great educators with this in view. Guard against the American spirit of haste and over-nervousness in education, because these are destructive to character. Guard against the miserable bread-and-butter spirit which makes livelihood more than life, and the secularizing spirit which strips away the foundation of and motives to character. Labor to put this first where it really belongs. Do all you can energetically as supplying the great need of our time and country for education of the conscience. Make better men and nobler women the vividly conceived and ever more diligently pursued ideal of your whole endeavor. Breathe this purpose into the soul of each teacher, and that will find or make its own method.

We need to think much upon the nobility of the ideal we cherish when we educate to form character. It is to transmute fleeting impressions into permanent results and to make the perception of a moment the ideal of a life. It is to exalt being over seeming (the thing the world's greatest minds, from Plato to Carlyle, have striven to do). It is to construct in character an eternal reflector for the grandest truths comprehensible to man. It is to educate for God, and country, and eternity. It is to adopt Whittier's wish for his namesake, and realize it for the millions:

> No dreamer thou, but real all,
> Strong manhood crowning vigorous youth,
> Life made by duty epical
> And rhythmic with the truth.

How infinite the importance of everything connected with the moral outcome of our modern education! Its vastness and the rapidity with which it is growing vaster; its firm grasp upon all life forces and the rapidity with which its grasp is growing firmer; its *extension* over the time of man's brief life, and its *intension* as it deepens its penetration to an all-embracing command of body, mind, and soul — make the question of moral outcome supreme and even thrilling in its importance.

And the outcome will infallibly be controlled by the aim and final end proposed — so long as education is (or in proportion as it becomes) a rational process.

We need, therefore, to keep on studying our final aim in education and how we may realize it. And the greatest interest in this question does not belong to the higher education, but to the secondary and the primary. And in greater proportion it belongs to the former of these two rather than to the latter. Just here I should say in this body in which concenters representatively the general conduct of the secondary education—just here where I suppose controlling opinions to be formed by interchange and comparison of conviction and experience, *concenters the responsibility for the moral outcome of our public-school system.* It is something to give one pause, and an interval of far-sighted vision while he pauses, and an access of real awe, as he thinks of the sacredness of the teacher's trust.

Jefferson said (Jefferson who would have "Founder of the University" inscribed upon his tomb): "Were it necessary to give up either the primaries or the university, I would rather abandon the last, for it is safer to have a whole people reasonably enlightened than a few in a high state of science and the many in ignorance."

It is almost too early in the primary schools to make sure of the product, and in the colleges it is almost too late to do much more than systematize and polish the product. But here, in the great middle section of our country's training, is the place of greatest power, and therefore of greatest responsibility.

NATIONAL COUNCIL OF EDUCATION

CONSTITUTION

PREAMBLE

The National Council of Education shall have for its object the consideration and discussion of educational questions of general interest and public importance, and the presentation, thru printed reports, of the substance of the discussions, and the conclusions formulated. It shall be its object to reach and disseminate correct thinking on educational questions; and, for this purpose, it shall be the aim of the Council, in conducting its discussions, to define and state with accuracy the different views and theories on the subject under consideration, and, secondly, to discover and represent fairly the grounds and reasons for each theory or view, so far as to show, as completely as possible, the genesis of opinion on the subject. It shall be the duty of the Council, in pursuance of this object, to encourage from all its members the most careful statement of differences in opinion, together with the completest statement of grounds for the same. It shall further require the careful preservation and presentation of the individual differences of opinion, whenever grounds have been furnished for the same by members of the Council. It shall invite the freest discussion and embody the new suggestions developed by such discussions. Any member making such suggestion or objection may put in writing his view, and the grounds therefor, and furnish the same to the secretary for the records of the Council. It shall prepare, thru its president, an annual report to the National Educational Association, setting forth the questions considered by the Council during the previous year, and placing before the association, in succinct form, the work accomplished. It shall embody in this report a survey of those educational topics which seem to call for any action on the part of the association. The Council shall appoint, out of its own number, committees representing the several departments of education, and thereby facilitate the exchange of opinion among its members on such special topics as demand the attention of the profession or of the public.

ARTICLE I — MEMBERSHIP

1. The National Council of Education shall consist of sixty members, selected from the membership of the National Educational Association. Any member of the association identified with educational work is eligible to membership in the Council, and after the first election such membership shall continue for six years, except as hereinafter provided.

2. In the year 1885 the Board of Directors shall elect eight members — four members for six years, two for four years, and two for two years; and the Council shall elect eight members — five members for six years, two for four years, and one for two years; and annually thereafter the Board of Directors shall elect five members and the Council five members, each member, with the exception hereinafter provided for (section 5), to serve six years, or until his successor is elected.

3. The annual election of members of the Council shall be held in connection with the annual meetings of the association. If the Board of Directors shall fail, for any reason, to fill its quota of members annually, the vacancy or vacancies shall be filled by the Council.

4. The term of service of the several members of the Council chosen at the first election shall be arranged by the Executive Committee of the Council.

5. The absence of a member from two consecutive annual meetings of the Council shall be considered equivalent to resignation of membership, and the Council shall fill vacancies caused by absence from the Council as herein defined, as well as vacancies caused by death or resignation, for the unexpired term. All persons who have belonged to the Council shall, on the expiration of their membership, become honorary members, with the privilege of attending its regular sessions, and participating in its discussions. No state shall be represented in the Council by more than eight members.

ARTICLE II—QUALIFICATION FOR MEMBERSHIP

All members of the Council shall be either life or active members of the National Educational Association.

ARTICLE III—MEETINGS

There shall be a regular annual meeting of the Council held at the same place as the meeting of the National Educational Association, and at least two days previous to this meeting. There may be special meetings of the Council, subject to the call of the Executive Committee, but the attendance at those meetings shall be entirely voluntary. A majority of the Council shall constitute a quorum for the transaction of business at any meeting, whether regular or called; but any less number, exceeding eight members, may constitute a quorum for the transaction of business at the regular annual meeting, as defined in this article.

ARTICLE IV—THE WORK OF THE COUNCIL

The Council shall, from time to time, undertake to initiate, conduct, and guide the thoro investigation of important educational questions originating in the Council; also to conduct like investigations, originating in the National Educational Association, or any of its departments, and requiring the expenditure of funds.

ARTICLE V—THE APPOINTMENT OF SPECIAL COMMITTEES AND EXPERTS

In the appointment of special committees and in the selection of writers and speakers, it shall be the privilege of the Council to appoint such experts, whether members of the Council or not, as are deemed best qualified to conduct investigations.

ARTICLE VI—PREPARATION OF INDIVIDUAL PAPERS

1. The president of the Council shall send out, at least six months before each session of the Council, a circular inviting the submission of volunteer papers by members, requesting them to suggest names of other persons, not members of the Council, whom they believe willing and able to present valuable contributions to educational literature.

2. The Executive Committee shall determine what papers so offered shall be presented at the meeting of the Council.

The reports and papers to be presented to the Council shall be printed and placed in the hands of the members at least four weeks before the session. The papers so printed shall be discussed, but not read in full, at the meeting.

3. Whenever the printing of a paper is not feasible, an abstract or brief of such paper, if possible in the form of theses, shall be sent to the members of the Council at least a month before the meeting.

ARTICLE VII — STANDING COMMITTEES

1. There shall be three standing committees: an Executive Committee, a Committee on Membership, and a Committee on Educational Progress.

2. The Executive Committee shall be composed of the president of the Council and of three other members, whose terms of office shall be so arranged that one new member may be chosen each year, beginning with the year 1899.

3. It shall be the duty of the Executive Committee to provide an annual program by selecting, whenever feasible, subjects for investigation, and appointing committees to conduct such investigations. It shall be the duty of the Executive Committee to carry out the provisions contained in this constitution referring to volunteer and invited papers. It shall be the duty of the Executive Committee to provide a place on the program for the report on any investigation which may be ordered by the National Educational Association or its departments.

4. The Committee on Membership shall be composed of the president of the Council and six other members, whose terms of office shall be so arranged that two vacancies may be filled every year, beginning with 1899.

5. There shall be appointed annually a committee of one to submit, at the next meeting, a report on "Educational Progress during the Past Year," in which a survey of the important movements and events in education during the preceding year is given. This committee need not be selected from the members of the Council.

ARTICLE VIII — THE DUTIES OF THE COUNCIL

1. It shall be the duty of the Council to further the objects of the National Educational Association, and to use its best efforts to promote the cause of education in general.

2. The meetings of the Council shall be, for the most part, of a "round table" character.

ARTICLE IX — AMENDMENTS

This constitution may be altered or amended, at a regular meeting of the Council, by a two-thirds vote of the members present, and any provision may be waived at any regular meeting by unanimous consent.

By-laws not in violation of this constitution may be adopted by a two-thirds vote of the Council.

The undersigned, Committee on Revision, have carefully collated the amendments to the constitution of the Council of Education, made at the Washington meeting, with the original document, and respectfully certify to the Secretary of the National Educational Association the above as the revised constitution of the Council, subject only to the approval of the *form* by the Council, to be had at the meeting to be held in 1899.

B. A. Hinsdale,
William E. Sheldon,
Committee on Revision.

OFFICERS, MEMBERS, STANDING COMMITTEES

OFFICERS FOR 1897-98

CHARLES DE GARMO	Swarthmore, Pa	*President*
WILLIAM F. KING	Mt. Vernon, Ia	*Vice-President*
BETTIE A. DUTTON	Cleveland, O	*Secretary*

Executive Committee—The president, vice-president, secretary; B. A. Hinsdale, Ann Arbor, Mich.; J. H. Phillips, Birmingham, Ala.; C. H. Keyes, Holyoke, Mass.; Walter L. Hervey, New York, N. Y.

OFFICERS FOR 1898-99

A. R. TAYLOR	Emporia, Kan	*President*
JAMES H. VAN SICKLE	Denver, Colo	*Vice-President*
BETTIE A. DUTTON	Cleveland, O	*Secretary*

Executive Committee—The president; John Dewey, Chicago, Ill.; Nicholas Murray Butler, New York, N. Y.; L. H. Jones, Cleveland, O.

MEMBERS

NOTE: The letter "A" following a name denotes that the member is of the class elected by the association; the letter "C," by the Council.

	Term expires
W. H. Bartholomew, Louisville, Ky	A 1899
*Frank A. Fitzpatrick, Boston, Mass	A 1899
Henry Sabin, Des Moines, Ia	A 1899
*E. Oram Lyte, Millersville, Pa	A 1899
*J. M. Greenwood, Kansas City, Mo	A 1899
*Paul H. Hanus, Cambridge, Mass	C 1899
John Dewey, Chicago, Ill	C 1899
*Nathan C. Schaeffer, Harrisburg, Pa	C 1899
David L. Kiehle, St. Paul, Minn	C 1899
Mary E. Nicholson, Indianapolis, Ind	C 1899
C. C. Rounds, New York, N. Y	A 1900
*J. H. Phillips, Birmingham, Ala	A 1900
E. E. White, Columbus, O	A 1900
*James H. Baker, Boulder, Colo	A 1900
*Oscar H. Cooper, Galveston, Tex	A 1900
Aaron Gove, Denver, Colo	C 1900
*William E. Sheldon, Boston, Mass	C 1900
*Irwin Shepard, Winona, Minn	C 1900
*Lucia Stickney, Cincinnati, O	C 1900
*H. H. Seerley, Cedar Falls, Ia	C 1900
*James M. Green, Trenton, N. J	A 1901
*Augustus S. Downing, New York, N. Y.	A 1901
*A. R. Taylor, Emporia, Kan	A 1901
*Ellen C. Sabin, Milwaukee, Wis	A 1901
J. R. Preston, Jackson, Miss	A 1901
George P. Brown, Bloomington, Ill	C 1901
*Bettie A. Dutton, Cleveland, O	C 1901
*Charles H. Keyes, Holyoke, Mass	C 1901
*Lightner Witmer, Philadelphia, Pa	C 1901
*William F. King, Mt. Vernon, Ia	C 1901
Edwin C. Hewett, Normal, Ill	A 1902
*Albert G. Lane, Chicago, Ill	A 1902
Edwin A. Alderman, Chapel Hill, N. C.	A 1902
Charles A. McMurry, Normal, Ill	A 1902
*J. F. Millspaugh, Salt Lake City, Utah	A 1902
Charles M. Jordan, Minneapolis, Minn	C 1902
E. W. Coy, Cincinnati, O	C 1902
Horace S. Tarbell, Providence, R. I	C 1902
*Edward R. Shaw, New York, N. Y	C 1902
*John W. Cook, Normal, Ill	C 1902
*W. T. Harris, Washington, D. C	A 1903
*C. B. Gilbert, Newark, N. J	A 1903
*William R. Harper, Chicago, Ill	A 1903
*George T. Fairchild, Berea, Ky	A 1903
*Charles R. Skinner, Albany, N. Y	A 1903
*Charles De Garmo, Swarthmore, Pa	C 1903
*L. H. Jones, Cleveland, O	C 1903
*Elmer E. Brown, Berkeley, Cal	C 1903
S. C. Williams, Ithaca, N. Y	C 1903
*Nicholas Murray Butler, New York, N. Y.	C 1903
*Richard G. Boone, Ypsilanti, Mich	A 1904
*F. Louis Souldan, St. Louis, Mo	A 1904
*L. D. Harvey, Milwaukee, Wis	A 1904
*Frank Rigler, Portland, Ore	A 1904
James H. Canfield, Columbus, O	A 1904
*Andrew S. Draper, Champaign, Ill	C 1904
*William H. Maxwell, New York, N. Y	C 1904
*James H. Van Sickle, Denver, Colo	C 1904
*B. A. Hinsdale, Ann Arbor, Mich	C 1904
*N. C. Dougherty, Peoria, Ill	C 1904

* Present at the meeting of the Council in Washington, 1898.

Total number present at the Washington sessions, 42.

Total number honorary members present at the Washington sessions, 8.

Largest attendance at any one session, 30.

HONORARY MEMBERS

Joseph Baldwin, Huntsville, Tex.
Henry Barnard, Hartford, Conn.
Earl Barnes, Stanford University, Cal.
William N. Barringer, Newark, N. J.
Newton Bateman, Galesburg, Ill.
D. Bemiss, Spokane, Wash.
Thomas W. Bicknell, Providence, R. I.
Albert C. Boyden, Bridgewater, Mass.
Anna C. Brackett, New York, N. Y.
John E. Bradley, Jacksonville, Ill.
Edward Brooks, Philadelphia, Pa.
William L. Bryan, Bloomington, Ind.
*John T. Buchanan, New York, N. Y.
Matthew H. Buckham, Burlington, Vt.
David N. Camp, New Britain, Conn.
Aaron L. Chapin, Beloit, Wis.
Clara Conway, Memphis, Tenn.
Matilda S. Cooper, Nyack, N. Y.
William J. Corthell, Gorham, Me.
J. L. M. Curry, Richmond, Va.
V. C. Dibble, Charleston, S. C.
John W. Dickinson, Boston, Mass.
Larkin Dunton, Boston, Mass.
*John Eaton, Washington, D. C.
Charles W. Eliot, Cambridge, Mass.
William W. Folwell, Minneapolis, Minn.
W. R. Garrett, Nashville, Tenn.
Daniel C. Gilman, Baltimore, Md.
James C. Greenough, Westfield, Mass.
John M. Gregory, Washington, D. C.
*W. N. Hailmann, Dayton, O.
G. Stanley Hall, Worcester, Mass.
Walter L. Hervey, New York, N. Y.
J. George Hodgins, Toronto, Canada.
Ira G. Hoitt, Sacramento, Cal.
James H. Hoose, Pasadena, Cal.
George W. Howison, San Francisco, Cal.
James L. Hughes, Toronto, Canada.
Thomas Hunter, New York, N. Y.
Ellen Hyde, Framingham, Mass.
John S. Irwin, Lafayette, Ind.
E. J. James, Chicago, Ill.
Henry N. James, Tacoma, Wash.
H. S. Jones, Lincoln, Neb.
E. S. Joynes, Knoxville, Tenn.
Thomas Kirkland, Toronto, Canada.
Henry M. Leipziger, New York, N. Y.
James MacAlister, Philadelphia, Pa.
*Albert P. Marble, New York, N. Y.
Francis A. March, Easton, Pa.
Lillie J. Martin, San Francisco, Cal.
Thomas J. Morgan, Washington, D. C.
Lemuel Moss, Minneapolis, Minn.
William A. Mowry, Hyde Park, Mass.
John M. Ordway, New Orleans, La.
Francis W. Parker, Chicago, Ill.
Warren D. Parker, River Falls, Wis.
S. S. Parr, St. Cloud, Minn.
W. H. Payne, Nashville, Tenn.
Selim H. Peabody, Chicago, Ill.
John B. Peaslee, Cincinnati, O.
William F. Phelps, St. Paul, Minn.
Josiah L. Pickard, Iowa City, Ia.
*John T. Prince, Boston, Mass.
*Zalmon Richards, Washington, D. C.
William H. Ruffner, Lexington, Va.
J. G. Schurman, Ithaca, N. Y.
H. E. Shepard, Charleston, S. C.
Edgar A. Singer, Philadelphia, Pa.
James A. Smart, Lafayette, Ind.
Euler B. Smith, Athens, Ga.
Homer B. Sprague........Cal.
J. W. Stearns, Madison, Wis.
Thomas B. Stockwell, Providence, R. I.
Grace Bibb Sudborough, Omaha, Neb.
John Swett, San Francisco, Cal.
W. R. Thigpen, Savannah, Ga.
H. S. Thompson, Columbia, S. C.
*L. S. Thompson, New Wilmington, Pa.
Julia S. Tutwiler, Livingstone, Ala.
Delia L. Williams, Delaware, O.
*J. Ormond Wilson, Washington, D. C.
H. K. Wolfe, Lincoln, Neb.
C. M. Woodward, St. Louis, Mo.

* Present at the meeting of the Council at Washington, 1898.

DECEASED MEMBERS

Robert Allyn	1894
Israel W. Andrews	1888
Norman A. Calkins	1895
N. R. H. Dawson	1895
Samuel S. Greene	1883
Daniel B. Hager	1896
John Hancock	1891
William D. Henkle	1882
Elnathan E. Higbee	1889
George Howland	1892
Merrick Lyon	1888
James McCosh	1894
M. A. Newell	1893
Birdseye G. Northrop	1898
Edward Onley	1886
Gustavus J. Orr	1888
John D. Philbrick	1885
R. W. Stevenson	1893
Eli T. Tappan	1888
Charles O. Thompson	1885
James P. Wickersham	1891

SECRETARY'S MINUTES

FIRST DAY

MORNING SESSION.— WEDNESDAY, JULY 6, 1898

The Council was called to order in the auditorium of Columbian University at 9:30 A. M. by the president, Charles De Garmo. After a welcome by Principal Charles S. Clark, chairman of the local committee of the Council, and response by the president, the program of the morning was introduced by an address by Dr. Edward M. Hartwell, of Massachusetts, on "School Hygiene — What It Is and Why We Need It."

"Literature — Bibliography," by Professor William H. Burnham, Clark University, was presented by Elmer E. Brown, of California, and ordered printed in the report of the proceedings.

"School Architecture — Heating, Ventilation, Lighting, and Sanitary Arrangements" was presented by F. Louis Soldan, of St. Louis, and Dr. D. H. Bergey, University of Pennsylvania.

"School Furniture — Seats, Baths, Blackboards, Maps, etc.," was presented by Superintendent Charles B. Gilbert, of New Jersey. Questions were asked and suggestions made in discussion of the subject by John W. Cook, J. M. Green, F. Louis Soldan, Professor G. W. Fitz, Harvard University; Edward R. Shaw, Professor Delos Fall, of Michigan; W. E. Sheldon, and J. H. Van Sickle. Dr. Hartwell closed the discussion.

AFTERNOON SESSION

President De Garmo called the Council to order at 2:30 and named the following committees:

COMMITTEE ON NOMINATIONS

John W. Cook.
Edward R. Shaw.
F. Louis Soldan.

COMMITTEE ON MEMBERSHIP

Nicholas Murray Butler.
James H. Baker.
James M. Green.

The subject of "School Diseases and Medical Inspection" was presented in a paper by Professor Delos Fall, of Albion College, Michigan, and "Medical Inspection of School Children," by Dr. Severance Burrage, Purdue University, Indiana.

The papers were briefly discussed by B. A. Hinsdale, John W. Cook, and others.

The next topics were "The Hygiene of Instruction," including reading, writing, arithmetic, etc., and "Studies of Fatigue," presented in papers by Professor G. W. Fitz, of Harvard University, and Edward R. Shaw, of New York.

A general discussion followed.

Adjourned at 4:30 P. M. to meet at 8 P. M.

EVENING SESSION

The Council convened at 8 o'clock.

The subject for the evening was "The Relation of Psychology in Its Various Aspects to Education," by Professor Josiah Royce, of Harvard University.

The second paper was presented by Dr. William T. Harris, United States Commissioner of Education, Washington, D. C., on "Rational Psychology for Teachers."

The last paper of the evening was presented by Lightner Witmer, of the University of Pennsylvania, and was entitled "Experimental and Physiological Psychology."

At 10 P. M. the Council adjourned.

SECOND DAY

MORNING SESSION—JULY 7

The Council assembled at 9:30 o'clock.

The session was devoted to a discussion of the report of the Committee of Twelve on Rural Schools, which was taken up under the following topics:

"School Maintenance," by Andrew S. Draper.

"School Supervision," by Newton C. Dougherty and N. C. Schaeffer.

"Supply of Teachers," by John W. Cook and C. B. Gilbert.

AFTERNOON SESSION

The discussion of the report on rural schools was continued by R. G. Boone, in a paper on "Instruction and Discipline in Rural Schools," under the following theses:

1. The advantages arising from grading small country schools are more than counterbalanced by the disadvantages of teaching together pupils widely separated in ability and requirements.
2. Whenever practicable, the pupils of small outlying districts should be transported, at public expense, to the town center; this plan may embrace all the pupils of the school, or only the older and more advanced.
3. With the limitations suggested in the report, the monitorial system can be employed to advantage in rural schools.
4. Where rural schools are maintained, written examinations for the older pupils should be held at stated times in town centers by the county superintendent or other competent officer, adequate records of the results of the examination being preserved for future reference.
5. For those who have left school, "school extension," in the form of recommended home reading, under the care of the teacher of the district, should be organized and directed by the town or county superintendent.

A general discussion followed.

At 4:30 the Council went into executive session.

EXECUTIVE SESSION

Thirty members present.

President De Garmo called for the report of the Committee on Reorganization.

REPORT OF THE COMMITTEE ON REORGANIZATION OF THE NATIONAL COUNCIL OF EDUCATION

Your committee, appointed to suggest plans for changing or modifying the present organization of the Council, begs leave to submit the following report:

I. DEFINITION OF THE WORK OF THE COUNCIL

1. It is recommended that the Council, from to time time, shall undertake to initiate, conduct, and guide the thoro investigation of important educational questions, such as the National Educational Association has undertaken in the past, or may hereafter desire to undertake.
2. It is suggested to recommend to the Board of Directors of the National Educational Association that it recognize the Council as the body thru which all such investigations ordered by the National Educational Association should be carried on.
3. The work of the Council shall also include the consideration and discussion of individual papers, as set forth in another part of this report.

II. COMMITTEES OF THE COUNCIL

1. It is suggested that the plan in use at present, of conducting investigations and discussions thru the reports of a fixed number of permanent standing committees, be abandoned.
2. As a new plan of work, it is recommended to the Council that it shall, from time to time, designate certain subjects for investigation by committees appointed for this special purpose.

3. In the appointment of these special committees, and in the selection of writers and speakers, it shall be the privilege of the Council to appoint such experts, whether members of the Council or not, as it deems best qualified to conduct such investigation.

III. PREPARATION OF INDIVIDUAL PAPERS

1. It is recommended that, at least six months before each session, the president of the Council send out a circular inviting the submission of volunteer papers by members, and requesting them to suggest names of other persons, not members of the Council, whom they believe willing and able to present valuable contributions to educational literature.

2. It is further recommended that the Executive Committee shall have power to determine what papers so offered shall be read at the meeting of the Council.

The reports and papers to be presented to the Council shall be printed and placed in the hands of the members at least four weeks before the session. The papers so printed shall be discussed, but not read in full, at the meeting.

Whenever the printing of the paper is not feasible, an abstract or brief of each paper, if possible in the form of theses, shall be sent to the members of the Council at least a month before the meeting.

IV. STANDING COMMITTEES

1. There shall be three standing committees, an executive committee, a committee on membership, and a committee on educational progress.

EXECUTIVE COMMITTEE

2. The Executive Committee shall be composed of the president of the Council, and of three other members, whose term of office shall be so arranged that one new member may be chosen each year.

3. It shall be the duty of the Executive Committee to provide an annual program by selecting, whenever feasible, subjects for investigation, and appointing committees to conduct such investigations. It shall be the duty of the Executive Committee to carry out the provisions contained in this report referring to volunteer and invited papers.

It shall be the duty of the Executive Committee to provide a place on the program for the report on any investigation which may be ordered or referred by the National Educational Association.

COMMITTEE ON MEMBERSHIP

4. The Committee on Membership shall be composed of the president of the Council and six other members, whose terms of office shall be so arranged that two vacancies may be filled every year.

5. It shall be the duty of this committee to secure the best possible nominations for the vacancies to be filled by the Council.

COMMITTEE ON EDUCATIONAL PROGRESS

6. There shall be appointed annually a committee of one to submit, at the next meeting, a report on "Educational Progress during the Past Year," in which a survey of the important movements and events in education during the preceding year is given. This committee need not be chosen from the members of the Council.

V. ROOMS FOR MEETINGS

The meetings of the Council should, for the most part, be of a "round table" character.

The objects to be attained by the meetings of the Council are promoted, not so much by discussions appealing to large audiences, as by a quiet exchange of opinion among the members of the Council. Largely attended meetings are not conducive to this purpose.

It is, therefore, recommended that the Council instruct the officers and committees in charge of the providing of rooms for the meetings to be guided by these principles.

VI.

It is recommended that a committee of three be appointed to revise the constitution of the Council, and to embody such provisions of this report as may be approved at this meeting.

F. LOUIS SOLDAN, *Chairman.*
NICHOLAS MURRAY BUTLER.
CHARLES B. GILBERT.
JAMES H. BAKER.
JAMES M. GREENWOOD.

The report was read by F. Louis Soldan, and was discussed — article by article — by Messrs. Draper, Cook, King, Hinsdale, Maxwell, Baker, Seerley, Sheldon, Green, Brown, Millspaugh, and Marble.

W. F. King moved the adoption of the entire report, which motion was carried, and a committee of three, to be named later, appointed to do the work recommended in sec. vi.

Mr. Dougherty moved that the chair appoint a committee of fifteen, the majority of whom shall be members of the Council, who shall investigate the entire subject of the establishment of a national university, and report to the Council. Carried.

The following committee was subsequently announced by President De Garmo, viz.:

President William R. Harper of the University of Chicago, *chairman*.
President Edwin A. Alderman of the University of North Carolina.
President James B. Angell of the University of Michigan.
Professor Nicholas Murray Butler, of Columbia University.
President James H. Canfield of Ohio State University.
Dr. J. L. M. Curry of Washington, D. C., agent of the Peabody and Slater Funds.
Superintendent Newton C. Dougherty, Peoria, Ill.
President Andrew S. Draper of the University of Illinois.
President Charles W. Eliot of Harvard University.
Professor Edmund J. James, of the University of Chicago.
Superintendent William H. Maxwell, New York, N. Y.
Professor Bernard J. Moses, of the University of California.
President J. G. Schurman, of Cornell University.
Superintendent F. Louis Soldan, St. Louis, Mo.
President William L. Wilson of Washington and Lee University.

The Committee on Membership reported as follows:

REPORT OF THE COMMITTEE ON MEMBERSHIP

To the National Council of Education: The undersigned members of the committee appointed to nominate members to fill vacancies occurring in the Council at the present time, thru expiration of term of service, and because of absence from two consecutive meetings of the Council, report the following names:

Andrew S. Draper, of Illinois;
William H. Maxwell, of New York;
James H. Van Sickle, of Colorado;
B. A. Hinsdale, of Michigan;
Newton C. Dougherty, of Illinois;
all to succeed themselves, their term to expire in 1904.

To succeed William A. Mowry, of Massachusetts, Paul H. Hanus, of Massachusetts, term to expire in 1899.

To succeed W. L. Bryan, of Indiana, Lightner Witmer, of Pennsylvania, term to expire in 1901.

To succeed Euler B. Smith, of Georgia, Edwin A. Alderman, of North Carolina, term to expire in 1902.

To succeed Earl Barnes, of California, George T. Fairchild, of Kentucky, term to expire in 1903.

Respectfully submitted,
NICHOLAS MURRAY BUTLER,
JAMES H. BAKER,
JAMES M. GREEN,
Committee.

The report was adopted, and the persons named were declared duly elected to membership.

The Committee on Nominations reported the following nominations for officers of the Council for the ensuing year:

For *President*— A. R. Taylor, Emporia, Kan.
For *Vice-President*—James H. Van Sickle, Denver, Colo.
For *Secretary*— Miss Bettie A. Dutton, Cleveland, O.

The report of the committee was adopted, and the above-named nominees were declared duly elected as officers of the Council for the ensuing year.

The Council adjourned at 6 o'clock P. M. to meet Monday, July 11, at 9 o'clock A. M.

EXECUTIVE SESSION —*continued.*— MONDAY, JULY 11, 9 A. M.

William E. Sheldon, of the Committee on Revision of the Constitution, read a report suggesting certain verbal changes in the form of the constitution, to bring it into harmony with the report of the Committee on Reorganization, which had already been adopted. C. B. Gilbert moved the adoption of the report and the appointment of a committee of three, to make the necessary revision of the constitution and to furnish a copy of such revision to the Secretary of the National Educational Association for publication as the "Constitution of the Council." The committee so authorized consisted of C. B. Gilbert, William E. Sheldon, and B. A. Hinsdale.

An executive committee for one year was appointed as follows:

John Dewey, Chicago, Ill.
Nicholas Murray Butler, New York, N. Y.
L. H. Jones, Cleveland, O.

It was moved and carried that a committee of five be appointed by the incoming president to report on the feasibility of the proposed report on libraries.

E. E. Brown, of California, referred to the absence, owing to ill health, of Dr. A. J. Rickoff, and to his active interest in the work of the Council. Messrs. Harris, Soldan, and Sheldon were appointed a committee to express to Dr. Rickoff the best greetings of the Council, with regret at his enforced absence from its sessions.

Communications were received from James H. Canfield, C. C. Rounds, Henry Sabin and W. H. Bartholomew, giving reasons for their absence and expressing sincere regret On motion, these gentlemen were excused, and the secretary was directed to record the same in the annual report of proceedings.

B. A. Hinsdale expressed, on behalf of the Council, thanks to the officers for their efficient service. After introductory remarks by A. R. Taylor, the president-elect, the Council, at 11 A. M., adjourned.

BETTIE A. DUTTON,
Secretary.

PAPERS AND DISCUSSIONS

SCHOOL HYGIENE—WHAT IT IS AND WHY WE NEED IT

BY DR. EDWARD M. HARTWELL, BOSTON, MASS.

Health—how to find and how to keep it—is a matter of such general and continual interest that discussion regarding it seems to be always in order. Still, the conclusion of the whole matter is never reached; perhaps it never can be reached till a generation shall arise which is willing to profit fully by the experience of its forerunners, and able to command implicitly the confidence of at least its immediate successor.

Laudation of a sound mind in a sound body dates from classic times, and the literature of education, from Plato's time to our own, abounds in rhapsodies and disquisitions on health and the art of securing it; but the history of education affords comparatively few instances of successful attempts, on a large scale, by educational authorities to frame their codes and order their practices in accordance with the teachings of the best medical science of their times.

Sir Thomas Elyot was an English scholar, diplomat, and jurist in the time of Henry VIII. Elyot's *The Governour* is probably the first treatise on education written in English. It is interesting to note that Elyot also wrote a book called *The Castell of Helth*, in which he laid emphasis on the value of preventive medicine, or hygiene, as we should call it. "And why, I pray," says Elyot, "should men have in disdain or small reputation the science of physic? Which being well understood, truly experienced and discreetly ordered doth conserve health, without which all pleasures be painful, riches unprofitable, company annoyance, strength turned to feebleness, beauty to loathesomeness, senses are dispersed, eloquence interrupted, remembrance confounded."

Both education and physic have been transformed since Elyot's day; but it is the latter which has made the greater advance, owing to the keener appreciation and quicker responsiveness of its devotees to the modern scientific spirit.

In a sense, hygiene is the most highly developed and important department of medical science. For the purposes of our discussion, the only hygiene worth considering is modern hygiene, or the art and science of health as based upon the teachings of the modern doctrine of the human body. That doctrine is one of the most notable and significant achievements of the modern spirit. It has been wrought out and developed during the past 250 years thru the improvement and consolidation of the physical sciences, particularly of those known as the biological sciences. Thru the advance made in these sciences, which are the offspring of medicine, man's knowledge of himself has been immensely increased and clarified, and his conception of nature, and of his place in nature, radically changed.

In general terms, the modern doctrine of the human body is based upon two leading ideas, namely, (1) that the organism is a living machine by means of which energy is transformed and utilized; (2) the adult body is the product of organic evolution, to the outworking of whose laws it owes its rank among organisms, and its efficiency as an individual organism.

The body as a whole is a communal structure, a sort of federal union of organs and tissues, in which the working unit is the individual cell. Among machines the body resembles an army or a city, rather than such a mechanism as a clock or a windmill. "Of this army," says Huxley, "each cell is a soldier, an organ a brigade, the central nervous system headquarters and field telegraph, the alimentary and circulatory system the commissariat."

The body is a complicated machine, made up of component mechanisms which are divisible into somatic, or leading, and minor, or subordinate, according as they subserve general or restricted functions. Again, the somatic systems of organs constitute a hierarchy, at whose head are the master tissues and organs which rule the executive machinery of the body, i. e., the skeleton and the skeletal muscles. The nervous and muscular tissues are the master tissues; the nervous tissues being the masterful tissues *par excellence*. The muscles are the executive end organs of the central nerve cells, and have so little power of initiative that they may be termed the slaves of the latter. Omitting the indifferent and reproductive tissues, all the other somatic tissues serve the master tissues either as "purveyors" or as "scavengers," since their office is either to aid in preparing and distributing energy-yielding material, the arterial blood for the use of the neuro-muscular system, or in clearing away waste matters which arise in the master tissues. The tissues and tissue elements, notwithstanding their diversity and multiplicity, are integrated and the body made one by (1) the system of tubes which contain the blood, which is the main source of potential energy, and (2) the system of gray nerve threads, emanating from the brain and spinal cord, whereby the expenditure of active energy in the working tissues is regulated.

The work of the body, stated in terms of physics, consists in metamorphosing material capable of yielding potential energy, in the transformation of potential energy thus derived into forms of active energy, and in expending such form of energy on the chemical, thermal, and mechanical work of the body. It is pre-eminently the function of the master tissues to turn the net income of the body to the fullest and best account as active energy; which net income is what remains from the gross income, derived from food stuffs, after the fixed charges requisite for the construction, maintenance, and repair of the tissues have been met. To secure the economical and advantageous expenditure of the net income of the body, it is essential that the neuro-muscular system should be healthy, i. e., capable of working smoothly in all its structural parts, and habituated to purposive, co-ordinated, and balanced actions.

Health of the body has been defined as the greatest energy of each part compatible with the greatest energy of the whole, and, again, as the smooth working of the bodily machine. The smooth working of the several component mechanisms is requisite for the smooth working of the whole, and *vice versa*. The health of the master tissues is of paramount importance in the bodily economy. The head of the dynasty of master tissues is the brain (using the term to include the whole central nervous system). Healthful brain action is conditioned upon normal muscular responses to nerve stimuli, as well as upon prompt and adequate action of the blood-making, blood-distributing, blood-ventilating, and blood-purifying mechanisms, all of which organs, being under the control of the central nervous system, must, in order to work smoothly, be subject to the regulative action of a healthy brain. If once we clearly apprehend the variety and significance of the bodily functions exercised by the brain, in addition to its so-called mental functions, we shall be ready to admit the importance of striving to shape education so that school life shall exert a positively hygienic and beneficial influence upon the bodily growth and development of the school child.

If the individual human being acquired an adult body at birth, the problems of hygiene in general, and of school hygiene in particular, would be much simpler than they are. As it is, we have to take account of the fact that the school population embraces a very considerable assortment of individuals, differing widely from one another as regards their powers of thinking, doing, and enduring. These differences result from the difference in size, complexity, and capability of the brains and bodies belonging to the different classes of the school population, which includes infants, children, and youth. The human individual in his passage from egg to ashes undergoes a series of transformations so radical and profound that he might almost be said to possess or occupy a series of bodies. The capital fact as to school children is that they are the immature young of the human species, and as such are subject to the laws of growth and development—to the laws of organic evolution, in other words.

The human body passes thru a series of progressive developmental stages. It begins as a simple unicellular organism. In its embryonic and fœtal stages it undergoes enormous growth, and recapitulates in a condensed and schematic way the evolution of its ancestors in the zoölogical series. At birth the human being ceases to be an attached parasite and becomes a detached, air-breathing parasite. Not till established adolescence is it fit to begin to fend for itself. The body of the human infant is a vastly more complicated and capable mechanism than is that of the human embryo, but in comparison with the adult body, or even that of the budding adolescent, it is a relatively undeveloped and incapable mechanism. The matter of mere growth is of importance, since at birth the body of the infant has attained to scarcely more than one-third of the stature and one-twentieth of the weight found in the adult body, on the average.

The infant lacks teeth and finished bones; his muscles are relatively small and weak, and his cerebral powers are of little worth. But the law of growth applies to the cells, tissues, and organs of the infant's body; and, given favorable circumstances, its most highly complicated and specialized organs will attain completeness, and its relatively simple structures will attain their limits of complication. Among organisms the simpler and more generalized forms appear first, and the more complicated and specialized are evolved from them. The order and rate of growth, i. e., quantitative change, and of development, i. e., qualitative improvement, of the several organic systems of the body differ widely in a given developmental stage (and in different stages as regards a given system of organs). Thus at birth the muscles constitute but 23.4 per cent. of the total weight of the body, whereas in the adult 43.1 per cent. of it is made up of the weight of the muscles. The brain of the babe equals 14.34 per cent. of its total weight, while the brain weight of the adult amounts to only 2.37

per cent. of his body weight. The brain's growth rate during childhood is more rapid than that of the muscles. The brain's growth, in substance, culminates at about the time of the second dentition, so that it reaches its full weight, within a few ounces, in the seventh or eighth year; but the development of the brain proceeds far into adult life. Dr. Clouston declares that the brain of a child of eight, as regards what it can do and withstand, differs so much from that of the adult that it might properly be considered as belonging to the member of a different animal species. The growth of the muscles does not culminate till after puberty is established. Full neuro-muscular development must wait for full growth of brain and muscles.

Similarly the law of growth is exemplified in the brain and nerves. The sensory areas in the brain are, relatively to the motor areas, more fully grown and developed at birth. Certain neuro-muscular mechanisms, which are termed fundamental, e. g., those concerned in breathing movements, are fully formed at birth; while certain other neuro-muscular mechanisms, belonging to the class called accessory, e. g., those concerned in speech and manipulation, are structurally and functionally undeveloped in infancy and early childhood. It has also been shown that certain motor nerves do not acquire structural completeness till long after birth.

The law of the evolution of the nervous system is that the older, more fundamental parts, which subserve the more general functions, are first developed; and that the last acquired, most accessory and specialized, develop latest. This law seems to me to constitute a sure and serviceable criterion of the worth and propriety of educational procedures of every kind, since it affords a means of comparing our conventional methods of educating the individual with nature's method of educating the race. This law should also be accepted as a guiding principle by the school hygienist.

My main contention is that the problems of education are mainly problems in development, and that in our attempts to solve them we should seek to conform, as intelligently and fully as the state of our knowledge will permit, with the laws of evolution, in accordance with which man has been endowed with the most serviceable body, the most highly developed brain and mind, in the realm of animate nature. There are certain general conditions requisite for the healthful activity of animal tissues, organs, or organisms. They are a sufficient and regular supply of prepared energy-yielding material and of oxygen, the removal of waste substances, and alternating periods of activity and quiescence; in other words, animal mechanisms, singly and in the mass, to work smoothly require food and ventilation, drainage, exercise and rest. The aim of the hygienists is to secure these conditions of health for the class of persons with whose interests they are concerned. The public hygienist works thru schemes of sanitary engineering, medical inspection, and building laws. The personal hygienist attempts the practice of proper habits as to cleanliness, mental and bodily exercise, recreation, and diet on the part of the individual.

To secure health in the mass of the school population is far from a simple problem. It is a problem whose solution demands the co-operation of several classes of experts, among whom may be mentioned public-health officers, sanitary engineers, intelligent architects and builders, educational authorities and teachers, and school hygienists as such. The necessity for the co-operation of such a variety of persons arises from the peculiar constitution of the school population, and from the artificial and untoward conditions under which it is frequently housed and required to work.

Going to school is a sedentary occupation. The school population, embracing, as it does, nearly a quarter of the total population, constitutes the largest contingent of sedentary workers, devoted to a single pursuit, in the country. Upward of 90 per cent. of the school population is found in the elementary schools, and is composed chiefly of children between the ages of five and fifteen years. The inevitable disadvantages of sedentary conditions are enhanced to a considerable degree by the undue crowding, which increases year by year in the growing cities of the country. To counteract urban tendencies and influences demands a larger expenditure of wisdom and of funds than most school boards can command. If in congested districts the schools are placed on contracted sites, cut off from free light and air, and overfilled with pupils, the school population contributes unduly to the spread of infectious diseases. Lest the schools should thus become a menace to the public health, it is desirable that they should be subject to periodical medical inspection by representatives of the board of health. It is significant that New York and Chicago have already followed the example of Berlin and established a tentative system of medical inspection of their public schools. But such a system of inspection, necessary tho it be, is not school hygiene or an adequate substitute for school hygiene. I hold that the guardians of the public health should be consulted in regard to the selection of school sites and the acceptance of plans for the erection and sanitation of school buildings. At present it is too frequently the case that public-health officers and sanitary experts are not consulted by school authorities until the presence of a nuisance is suspected. It is folly to erect buildings for hundreds, and even thousands, of children without taking expert advice as to the proper measures for securing adequate drainage, ventilation, light, and heat. These are matters of sanitary engineering upon which the opinions of the average physician and of the average school superintendent are of little value.

But suppose that thru the conjoined action of health and school officers and sanitary experts a school building is well located, properly planned, and well equipped as to means for heating and ventilation, there is still room for further co-operation between the health and school authorities in ordaining an intelligible and workable code of instruction to be followed by janitors and teachers in the daily routine of school life. At this point the need of regular sanitary inspection of school yards and school buildings (quite apart from the medical inspection of the pupils and teachers) suggests itself.

School hygiene includes not only effectual care of the school population as such, hygiene of the school site, and hygiene of the school building, but also hygiene of the schoolroom, hygiene of the school child, and the hygiene of instruction. Hygiene of the schoolroom has regard to the appropriateness of the furniture, fittings, and educational appliances placed at the disposal of pupils and teachers. Hygiene of the school child includes all measures necessary to secure the smooth working, day by day, of the somatic and secondary mechanisms of the childish body.

As in the evolution of the child the processes of growth and development may be said to converge in the development of the brain, so every branch of school hygiene has a more or less influential bearing on the hygiene of the brain of the school child. The essential aim of all educational measures, machinery, and appliances is the development of sane minds, animated by reasonable motives and ruled by righteous and enlightened wills. The hygiene of the brain, in the larger and inclusive sense of the term, is the quintessence not only of somatic hygiene, but of all school hygiene. In a restricted sense it pays special regard to the welfare of the organs of sensation. It should pay no less special regard to the motor organs, both fundamental and accessory. To the neglect of this most important branch of school hygiene is largely due the prevalence of "school diseases," such as impaired vision, stuttering, and scoliosis. One need not be either an ophthalmologist, or an elocutionist, or an orthopædic surgeon, or a teacher of gymnastics, to be a school hygienist in the proper sense of the term; but we must know something of the aims and methods of such specialists, and be grounded in the principles of medicine to begin with. No mere graduate of a medical school—much less a mere normal-school graduate or a school functionary—is competent to perform the duties of a school hygienist. He should be trained in his specialty like other specialists. School hygienists of the kind required exist in small numbers in some parts of Europe. In this country they are non-existent. There is no supply of them, and almost no demand for them. To create a demand for school hygienists that the universities and technical schools cannot afford to ignore or deny seems to me the plain and present duty of the schoolmen and the medical profession of the United States.

The attempts thus far made to determine the hygienic conditions surrounding the school population have been few and feeble. Our need of a rational and effectual system of school hygiene is masked, to a certain extent, owing to the unusual power of children between ten and fifteen years of age—which period includes the period of most rapid growth and development, and also the period when death rates reach their minimum—to resist disease and death; but I hold that our need of such a system is none the less real.

I have had occasion to study the death rates of Boston children of the age period of five to fifteen years; and the fact that they were, for the period 1885–90, on the average 2.7 for the thousand living greater than for the same class of population in London, and 1.8 per thousand greater than for Berlin children of the same age, leads me, tho I am no alarmist, to think that there is an excessive loss of lives among Boston school children, which might be diminished if municipal and school hygiene were as well ordered and administered in Boston as in London and Berlin.

We need a better system of hygiene than we now have, because the best that we have does not compare favorably with the best that exists. The rapid growth of city slums, and wider knowledge of what school hygiene can effect and has effected, are likely before long to bring us to a realizing sense of our needs. It is to be hoped that our needs will be realized by our school authorities as a result of their own interest and study of the whole question.

"Lord God!" exclaimed Sir Thomas Elyot in *The Governour*, "how many good and clean wits of children be perished through the ignorance of schoolmasters." It behooves us to present the just utterance of such a reproach against the teachers of this country!

BIBLIOGRAPHY OF SCHOOL HYGIENE

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During the last twenty-five years a rich literature in the field of school hygiene has been produced, but a large part of this is scattered thruout the archives, journals, and general literature of other subjects, so that it is very difficult in limited space to make a satisfactory bibliography. In a brief catalog completeness is impossible. In the following pages the attempt is made to give a representative list of the most important literature.

In periodicals only the more important and representative articles are mentioned, and frequently, in case of several contributions by the same writer, only one or two are cited. The lack of attention to some parts of this subject in England and America, and the richness of the contributions in continental countries, have made it necessary to include a large proportion of foreign, especially German, literature. In this country the more important papers on school hygiene have usually appeared in reports of boards of health and other medical literature, in the proceedings of various societies, in special reports by school officials, or the like. No attempt has been made to mention this literature in detail, but a special list is made of some of the more important journals and reports containing such contributions.

For supplementary bibliographies one should consult the various handbooks—for the older literature, the handbooks by Roth and Baginsky; for the more recent literature, Burgerstein and Netolitzky, Eulenburg and Bach, Kotelmann, and the *Zeitschrift für Schulgesundheitspflege;* for the literature of general hygiene, Weyl's handbook, and the annual bibliography in the *Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege;* and in related subjects, the *Bibliography of Child-Study* by Louis N. Wilson, *Bibliographies of Gymnastics* by John M. Pierce, the *Catalogue of the Surgeon General's Library*, the *L'année psychologique*, and the *Index Medicus*. Special attention should be called to the important articles on school hygiene in the reports and papers of the American Public Health Association, and in the reports of state boards of health, to which only a blanket reference is made.

While only a small part of the literature on some special subjects is mentioned, what has been chosen will usually serve as an introduction and guide to the subject; for example, Schubert, in his article on vertical script, gives a bibliography of some 150 titles on that subject; and Mr. Burk, in his article on growth, has appended a descriptive bibliography. The aim has been to give representative literature covering the whole field of school hygiene, even at the expense of neglecting important titles in some of the more familiar parts of the field. It is hoped that the bibliography may be judged by what is presented rather than by what is omitted.

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SCHOOL ARCHITECTURE—HEATING, VENTILATION, LIGHTING, AND SANITARY ARRANGEMENTS

BY F. LOUIS SOLDAN, SUPERINTENDENT OF SCHOOLS, ST. LOUIS, MO.

[ABSTRACT]

It is difficult to speak of the subject of heating in a general way, because the method of warming a school building must necessarily differ with its size, its climatic location, and the means at the disposal of the board of education that builds it. The modes of heating—by stoves, furnace, water, or steam—depend on the size and condition of the school. A few general principles may be stated, but they are necessarily commonplace. Nevertheless, they deserve reiteration. Leaving heating by indirect radiation aside, all heating of schoolrooms is done by the medium of the air, no matter what the heating surface is from which the air receives its warmth, whether it is a stove or a steam coil. The first requirement to be made on the heating apparatus is that it shall not emit smoke or gas to contaminate the air.

Another demand to be made is that the temperature of the schoolroom shall be fairly even. This cannot be accomplished by a heating apparatus whose heating surface is so small that it must be overheated in order to raise the air of the room to the temperature required. With the increase in the temperature of the heated air increases the thermal difference between the colder stratum of air, in which the feet of the children rest, and the warmer stratum of the level of their heads.

Superheated surfaces contaminate the air on account of the combustion of particles of organic dust that float in the atmosphere. The products of this combustion are irritating to eyes, palate, and throat, and make the air of the room unwholesome.

SCHOOL ARCHITECTURE—HEATING, VENTILATION, LIGHTING, AND SANITARY ARRANGEMENTS

BY D. H. BERGEY, M.D., FIRST ASSISTANT, LABORATORY OF HYGIENE, UNIVERSITY OF PENNSYLVANIA

Site, or location, with reference to drainage capacity of the soil.—In school architecture a question of primary importance, the consideration of which is frequently neglected, is that of location with regard to the nature of the soil and its drainage capacity. Satisfactory sanitary arrangements can rarely be secured in any building, unless the site of the building is carefully selected with regard to the drainage capacity of the soil. The soil structure as regards the preponderance of definite-sized grains, coarse or fine, influences the drainage capacity, and consequently the healthfulness of the site. The amount of slope and the proximity of the streams, either surface or underground, also influence the character of the soil. For these reasons it is of primary importance that the site selected for a school building shall be of such a nature as to afford the very best facilities for drainage, not only for refuse and excreta collected in the building, but for surface and rain water flowing over the soil. Whenever the soil of the site is not perfectly dry, it should be first underdrained.

Parkes states that the conditions which insure healthy habitations are:

1. A site that is dry and not malarious, and an aspect which gives light and cheerfulness.

2. A pure supply and proper removal of water, by means of which perfect cleanliness of all parts of the house can be secured.

3. A system of immediate and perfect sewage removal, which renders it impossible that the air or water shall be contaminated from excreta.

4. A system of ventilation which carries off all respiratory impurities.

5. A condition of house construction which insures perfect dryness of the foundation, walls, and roof.

Structure of walls.—Having selected a proper site for the building, the nature of the building is of considerable importance. The building itself should be detached so as to obtain an abundant supply of fresh air and the greatest amount of light. The character of the materials composing the walls and the thickness of the walls, the number of layers composing them, all have an important influence on the character of the building.

Cubic space and floor space: (*a*) *Cubic space.*—From calculations made by Professor Parkes and Dr. de Chaumont, the amount of air required for each adult per hour, in order to maintain a certain degree of purity in the atmosphere, is 3,000 cubic feet. The respiratory impurity added to the air will, of course, be less with children than adults; consequently, the amount of air required to maintain the standard of purity will be less. Tho children evolve less CO_2 in a given time than adults, yet relatively for their body weight they expire more. In fixing a standard for schools, the age of the children ought also to be considered; the average amount of air required being about 2,000 cubic feet per hour. Parkes says it is highly desirable that some general agreement should be come to as to the amount of air necessary, even if admitted that the desired amount cannot always be obtained. If we adopt the following amounts of CO_2 as being evolved during repose, we shall not be far from the probable truth:

Adult males (say 160 ℔s. weight), 0.72 of a cubic foot
Adult females (" 120 " "), .6 " " "
Children (" 80 " "), .4 " " "
Average of a mixed community, .6 " " "

The amount of fresh air that must be supplied in order to prevent the impurity due to products of respiration, exceeding a particular limit, is measured by the quantity of CO_2 present in excess over that in external air, according to either of the standards in use, and may be calculated from the formula $e/r = d$, where e = amount of CO_2 expired in cubic feet per head per hour; r = admissible limit of CO_2 due to respiratory impurity, stated per cubic foot; $d =$ delivery of fresh air per head in cubic feet.

Under these conditions the amount of fresh air to be supplied in health during repose ought to be:

For adult males,	3,600	cu. ft. per head per hour	$= 102^{cm}$
For adult females,	3,000	" " " " "	$= 85^{cm}$
For children,	2,000	" " " " "	$= 57^{cm}$
For a mixed community,	3,000	" " " " "	$= 85^{cm}$

The law of Massachusetts requires that each occupant of the room receive a quota of 30 cubic feet of air per minute. If this is taken as the basis for the minimum amount of air required by each child, and we require further that the air be changed but three times each hour, then the minimum amount of cubic space allowable for each child is 600 cubic feet. This is slightly lower than the theoretical amount, as shown by the calculations of Parkes, but it is far in excess of the amount of space usually supplied in our common schools.

When the air of a room is changed more frequently than three times an hour, there is always more or less draft in some portions of the room; and for this reason the minimum amount of space allowed should be 600 cubic feet. Even with this amount of cubic space it is impossible to keep the air of rooms of the same purity as outside air, owing to the gases given off during respiration. For this reason a certain amount of respiratory impurity, as it is called, is permissible in well-ventilated rooms. With the outside air containing four parts in 10,000 of carbonic acid, the additional amount permissible as coming from respiration is two parts in 10,000, making a total amount of carbonic acid in the room air of six parts in 10,000. It should be our aim in the ventilation of rooms to maintain the respiratory impurity at this low standard, and this it is possible to do if the initial cubic space is sufficient—say 600 cubic feet—and we have reliable mechanical means for introducing the requisite amount of fresh air each hour. If the cubic space is less, or the arrangements for the introduction of fresh air are imperfect, it is impossible to have perfect ventilation and pure air. It is, therefore, merely a matter of choice on our part whether we will elect to have efficient ventilation or not. It can be obtained by making the necessary expenditure. Without this it is impossible to obtain it.

(*b*) *Floor space.*—Each child should have a floor space of from 46 to 50 square feet. This amount of floor space, when the height of the room is 12 to 13 feet, will give each child a minimum cubic space of 600 cubic feet. The amount of floor space is an important factor, inasmuch as it is brought into relation with the height of the room.

Relation of window space to cubic space.—In fixing the height of stories, when not governed by the amount to be expended, the height of the basement should be 9 feet 6 inches to 10 feet. The first story should be 13 and the second story 12 feet in height. Light in rooms of the second story is always superior to that of the first: consequently, the increased height of the first story. There is also usually an increase of glass surface provided for the first story to equalize the difference in light. The window heads should be finished to the top, so that no shadow can be thrown on the ceilings. The sills of windows should be 3 feet 4 inches from the floor. The proportion of light to floor of class-rooms should never be less than 1 square foot of glass surface to 6 square feet of floor surface, for rooms 38 feet wide, lighted from one side only. Within the limits of a city, where the adjoining buildings are about 20 feet from the exterior walls, this proportion should be increased to 1 to 5.

Lighting.—The lighting of school buildings is a matter of very great importance. The windows should never be in the front of the room: only at the sides and rear. It is preferable to have them on the left side of the room, so as to have the light falling over the left shoulder of the pupil. The windows should be provided with shades or blinds, so that direct sunlight can be excluded as required. The amount of window surface should be about one-fifth of the floor space.

The authorities differ regarding the width of class-rooms and the quality of light. One says the width of rooms should equal two and a half times the top of windows from the top of desks. This would give about 26 feet width for a 13-feet story, and 24 feet for a 12-feet story. When there are no limitations, the nearer this rule is adhered to, the better the result.

As the sense of sight is the chief medium of education, it is hardly possible to overestimate the importance and necessity for carefully observing the management of light in schoolrooms. It has been positively established by careful and extensive statistics that short sight is most frequently, if not exclusively, developed during school life. This is due partly to the fact that the eye during this period of growth is more liable to change in form, and partly to the fact that children have much stronger power of accommodation than adults, and therefore hold objects more closely to the eye. The book or paper should never be closer to the eye than ten inches. If there is short sight enough to prevent the letters from being distinct at this distance, it is better to wear glasses in the study room. In erecting public schools it involves a little extra expense to provide windows of sufficient size. Architectural beauty ought to be a secondary consideration where such grave practical interests are involved. Dr. Cohen maintains that a schoolroom cannot have too much light, and recommends the very large proportion of one square foot window glass for every square foot of floor, and that less than about one-half of this proportion should never in any case be allowed. The arrangement that Mr. Eibereich advocates is to have the class-rooms of oblong shape, the windows being on one of the long sides and the desks arranged parallel to the short walls, so that the light falls from the left side.

The position of blackboards.—The blackboards should be on the inner wall of the room, where the greatest amount of light will fall upon them, and they should be of a dull black color. The principal cause of defective eyesight in school children is no doubt traceable to improper lighting of the room, which may be either excessive light or deficient light, or light coming from the wrong direction. The position of the blackboards and their frequent use for copying exercises, while the child is at its desk, require rapid changes in the accommodation, which is also a factor in producing defective eyesight. Another factor, independent of the arrangement of the schoolroom, is the use of books printed with defective type or with too small a type.

Corridors, cloakrooms, and wardrobes.—The corridors should be without obstruction, and never less than eight feet, preferably ten feet, wide. The stairways should be six feet wide, and each flight should be broken with a landing. These stairs should be as near to the exit as possible, and equally placed at each end of the building. The walls should be of brick, and finished in enameled brick or enameled paint.

As contagion is most likely to occur from garments, which, if porous, absorb and transport the gases, bacteria, etc., it is necessary to have two wardrobes properly arranged on each floor, one for each sex, if appropriation permits. The latest improved wardrobes, set up in separate rooms or in the corridors, either in the basement or on each story, are made with separate stalls of channel iron. At the bottom is a shelf for rubbers, two rings and cups for umbrellas, with hangings on each side. The best place for wardrobes is in each corridor, provided it is wide enough. Wardrobes seem to be the most difficult of school sanitation, there being many advantages in the open method of placing them in wide corridors or in the basement, unless an appropriation be large enough for special rooms, with thoro circulation of fresh air to be provided. The advantage of having them in the corridors is that the teacher in command of that floor maintains the discipline, and there will be no traveling up and down to the basement.

Ventilation.—The ventilation of buildings is accomplished by what is known as natural ventilation, or by artificial ventilation. Natural ventilation is dependent entirely upon the forces operating naturally, such as the influence of differences in temperature between inside and outside air, the action of the wind, etc. Artificial ventilation is accomplished by what is known as the vacuum method, or the plenum method, or it may be a combination of these. With regard to the introduction of fresh air, probably the most satisfactory arrangement for a school building is that by means of indirect heating, where the air required for ventilation is brought in at the desired temperature, thus maintaining the temperature of the room, while the purity of the atmosphere is secured at the same time.

As to the best method to introduce the requisite amount of air into school buildings, numerous systems of ventilation and heating are in use, several of which will give satisfactory results, if properly constructed. If the building contains as many as eight or ten rooms, and is two or three stories in height, it is impossible to ventilate it satisfactorily without the introduction of fans to assist in either propelling the incoming air, or extracting the foul air of the rooms. It is a common thing to have one of these blowers in the shaft thru which fresh air, already heated by passing over steam coils, makes its entrance into the room to be warmed and ventilated. These shafts are usually supplied with a by-pass valve, which is under the control of a thermostat, so that the supply of air is kept at a definite temperature automatically. As soon as the temperature rises above the desired point, the thermostat cuts off the supply of heated air, and allows cold air to enter and mix with the heated air. This not only facilitates the proper ventilation of the rooms, but likewise goes to economize in the amount of fuel used. By means of fans it is possible to introduce a definite amount of air in a definite period of time, the entire circulation of air being under control.

In this method of ventilation and heating it is possible to place the intake of fresh air at such a point as to prevent some of the grosser atmospheric impurities from gaining access into the building. This point of intake may vary according to the location of the building; ordinarily, it should be at least eight or ten feet above ground. It may be over the roof of the house, if it is found that at that point the air is purer than at a lower level. It is also possible by this method of ventilation and heating to filter the air, in order to remove the grosser dust particles, by passing it thru a screen over which a constant stream of water is flowing. It is also possible to regulate the humidity of the air, to some extent, by this means of ventilation thru this method of filtration, the air taking up some moisture in passing over the screen.

Heating.—Heating may be accomplished either by what is known as direct radiation, as by means of a stove or open fireplace, or thru steam or hot-water radiators in the room. Or it may be by what is known as indirect radiation, where the radiating surface is in some other portion of the building, and the rooms are heated by bringing in air that is warmed by passing over steam or hot-water coils. Where a system of direct heating is employed, whether by means of steam or hot water, the capacity of the heating plant should be adapted to meet the requirements placed upon it. Mr. William J. Baldwin, in his *Steam Heating Data*, states that the question of condensation of steam receives the first consideration in making calculations for the heating of a building. If asked the question why condensation is considered first, he would reply that "it furnishes us with the first item of data on which to base our calculations. For instance, when we find the amount of cooling or condensation that is to take place within a building in the coldest weather, we then know the amount of water it is necessary to evaporate to do this work. Having the amount of water evaporated, we can then obtain, in the order we please, the size of boiler necessary to evaporate the water, the amount of coal or other fuel that will evaporate the same water, the size of the grate on which to burn the coal, the size and height of chimney necessary to supply air for combustion, the size of the radiators necessary to condense the steam, the size of pipes necessary to convey steam or hot water to the radiators, and all other attendant data which will develop as we proceed."

Water supply and sewage disposal.—The building should have an abundant supply of pure water, so as to insure against the diseases ordinarily carried by water; also to facilitate the maintaining of strict cleanliness among the children in the building. It is also necessary to devise some means for the disposal of the sewage. This becomes a different question in different localities. In some instances, where the price of land will afford, it will probably be safest and cheapest in the end to have some form of surface irrigation. Where the price of land does not permit this method of disposal, it may be necessary to resort to properly constructed cesspools.

Water-closets and latrines.—Where there are no sewers, we unhesitatingly use the closets, but these should never be supplied with foul air drawn from the class-rooms above. There should be no connection of any kind between the class-rooms and the water-closets. In no case should wastes of sinks be discharged into these vaults. The wastes should enter a cesspool, preferably a double cesspool—a tight one for solids, a leeching one for liquids. The best urinal is of slate, with the dry-air system. There should be a connecting waste from the trough and a connection with the cesspool drain. Water-closets for the pupils' use, where there is water carriage, should be with automatic seats. Thick porcelain slabs, with backs, are the best and cheapest devices for drinking fountains in the corridors. The plumbing of the building should be the best obtainable, with tight joints and as few bends in the pipes as possible; and these pipes should be properly ventilated by means of an open trap outside the building, between it and the sewer, and by carrying the other end of the soil pipe up over the roof of the building, of the same diameter thruout. All the traps of the water-closets and sinks must be back-aired, in order to insure against the production of foul odors in the inclosed unventilated ends of the pipe; and also to prevent the unsealing of these traps.

Each floor of the school building should be provided with suitable water-closets, with automatic flushing arrangements. These toilet rooms should also be provided with sinks, so as to facilitate maintaining a proper degree of cleanliness of the hands and persons of the pupils. The expense of soap and towels to the community is a small one compared with the detriment occasioned by permitting the children to come in contact with each other when some of them are not as cleanly as they should be.

Defects in our school buildings.—During 1896–97 a committee of the Women's Health Protective Association of Philadelphia, with the assistance of Professor Woodbridge, of the Boston Institute of Technology, made a very thoro examination into the hygienic condition of 160 public-school buildings of Philadelphia. In summing up the result of their investigation they say that, next to uncleanliness, the greatest evil related to improper ventilation is due, on account of small yards, to the close proximity of buildings, some of many stories; the presence of coal gas; lack of sunshine; in the outside air, close proximity of sanitary buildings improperly constructed or carelessly cleaned and flushed; the keeping of wraps in schoolrooms or adjacent unventilated closets, and the almost total absence of ventilation by transoms, and in many instances the use of storm doors, rendering ventilation impossible save at the expense of the children's health. In one building, accommodating 200 little ones, the sun never enters, save in one room at the noon intermission. In some buildings there are as many as nine rooms never cheered by the sun. Fan or shaft ventilation cannot be introduced without great expense, but properly arranged door and window transoms for ventilation can be placed in every building at little cost, thus admitting fresh air without occasioning draft. This committee claims that every building should be supplied with such means of ventilation as will insure free circulation of air thruout the building. The prolific cause of the spread of contagious diseases is the keeping of wraps in schoolrooms. The committee is horrified to find that at least three-quarters of the older buildings have no cloakrooms, or very inadequate ones. In many cases there are no means of ventilating such rooms except thru the schoolrooms. Seventeen cases of scarlet fever occurred in one airy, spacious building in 1895, and three additional cases in 1896. This great epidemic was doubtless due to the lack of cloakrooms; the want still exists, and there are three large vacant rooms in the building.

On January 24, 1898, Dr. J. Howard Taylor, medical inspector of the health bureau, made his annual report on the sanitary condition of the public-school buildings of the city of Philadelphia. Dr. Taylor mentions all the school buildings, telling their good points as well as their bad ones, and notes the many improvements which, from the complaints of former years, have been made. The most important defects noted in the different buildings are: imperfect ventilation, insufficient water supply for the latrines, imperfect lighting, absence of cloakrooms, and unsatisfactory heating of the buildings, giving rise to gas in the schoolroom from defective furnaces. These defects were noted in a very large number of the school buildings.

In the face of the revelations made by Professor Woodbridge, on behalf of the Women's Health Protective Association, and by Dr. Taylor, medical inspector of the bureau of health, it should occasion no surprise that, at its last annual meeting in New York, the American Society of Ventilating Engineers thought there was a necessity for missionary work in connection with the heating and ventilating of schools, and that Philadelphia was a good place in which to begin the enterprise. It is to be hoped that this missionary work will be undertaken and pushed with untiring zeal, until all the school buildings, not only in Philadelphia, but in every large city, are placed in proper sanitary condition.

I am happy to state that all the new schoolhouses erected in Philadelphia within recent years are model constructions. These have four or five class-rooms on each floor, inclosed brick fire escapes, steel ceilings, and automatic-power ventilating and heating plant, calculated to deliver thirty cubic feet of fresh air per child per minute in each class-room.

SCHOOL FURNITURE—SEATS, BATHS, BLACKBOARDS, MAPS, ETC.

BY C. B. GILBERT, SUPERINTENDENT OF SCHOOLS, NEWARK, N. J.

[ABSTRACT]

The topics especially assigned me are seats, baths, blackboards, maps, etc., the last being delightfully vague and satisfactory. Upon most of the material appliances used in the schoolroom, such as seats, blackboards, and maps, there is such practical unanimity among school people that no discussion is needed. I will simply state the consensus, as I understand it.

I. SCHOOL DESKS AND SEATS

This was thoroly and authoritatively discussed by Dr. Mowry before this Council quite recently. Both desks and seats should be adjustable to the size and shape of individual children. Desks should be provided with book rests parallel with the eye when the body is in an erect position.

No entirely satisfactory adjustable desk has yet been invented, the elements almost universally lacking being simplicity of construction and ease of adjustment. The best form that I have ever seen, in these respects, is that of the ordinary piano stool, with clamps to hold the desk and seat in place. The desk that I saw, however, was lacking in strength. I believe that this is the principle of the coming adjustable desk.

II. BLACKBOARDS

All schoolrooms should be equipped with blackboards covering all the available space. These boards should be of slate, and should be placed at suitable heights for the children of the grades that are to occupy the rooms.

III. MAPS

No generalization can be made in regard to maps, except that all schools engaged in the study of geography should have an abundance of maps of various sorts, such as the work requires. If but one kind of map can be obtained, it should be a physical map. It is well for maps to hang open before children, even when not in direct use.

IV. BATHS

There is no reason in the nature of things why schools should not furnish baths to those children who are not bathed elsewhere. The cost of two bathing tanks, one for boys and one for girls, in each large school would be slight. The difficulties of administration are much less than they at first appear. I have no doubt that most of us will live to see the school buildings, erected in crowded and poorer districts of our large cities, equipped with bathing facilities.

V. ETC.

This title, I suppose, covers matters not included in the program elsewhere. I will speak of but two.

I. PLAYGROUNDS

In villages and small cities, with the country all around, the necessity of playgrounds is not so apparent, but in large cities they are necessary for physical and moral health. The great obstacle seems to be the cost of ground. Except in the very largest cities this should not be allowed to interfere. No school superintendent should allow his board of education to rest contented with a new school site that does not include ample playgrounds, for free play is the best exercise.

In the very large cities the roof playground, adopted in New York, seems to offer the needed solution of the difficulty; but wherever located, playgrounds must be furnished.

II. DIRECTED EXERCISES

This important department of hygienic effort I do not find included elsewhere in the program of this meeting, hence conclude that it belongs here.

Most school systems have some sort of physical exercises, mostly a very bad sort, consisting in standing in ungraceful attitudes, pounding the chest, shaking the fist in the air, and performing a few awkward and illy designed contortions, whose only value consists in the fact that they do, for a few minutes, stir the blood.

A carefully designed system of physical culture, progressive, scientific, fitted for children of different ages and different physical conditions, planned to develop strength, grace, and health, if it exists at all for a public-school system, is certainly a *rara avis.* A few such courses are found in special training schools, but they have not filtered down to the children. If children have a sufficient amount of wise and wholesome exercise, they will still grow up straight and healthy, even if they sit on benches without backs while studying. The essentials of a wise system of physical culture appear to me to be as follows:

1. *Interest.*— So far as possible they should resemble, and should be, play.

2. *Naturalness.*— The exercises should be such as children perform when unembarrassed, unconscious, and unwatched.

3. *Progressiveness.*— The work for the kindergarten and the eighth grammar grade should differ more than in the violence with which the chest is pounded and the air beaten.

4. *Possibilities of adaptation to individual needs.*— Voice, breathing.

5. *Relation.*— The exercises should not merely be related one to another, but to the life of the children in such a way that they themselves feel the advantage of them. It is not uncommon for the school exercises which may most readily arouse the child's interest, such as music, drawing, and physical culture, to be least successful in this respect.

SCHOOL DISEASES AND MEDICAL INSPECTION

BY PROFESSOR DELOS FALL, ALBION COLLEGE, MICH.

By the term "school diseases" is meant all such as are likely to be spread by the gathering of pupils in schools. The list is a very large one. They are probably all communicable diseases, but not all dangerous diseases. The list, however, would include only a portion of the dangerous communicable diseases to which all mankind is subject.

The common and well-received tradition concerning this subject is that, in the nature of the case, school diseases, like all others, are only to be recognized and dealt with by expert medical men, acting in the capacity of medical inspectors, who themselves must initiate and carry forward every movement which shall eventually rid the pupils and the school of disease and allow them to pursue their work under improved conditions. This method makes the medical inspector the only active agent in working out the problem of restricting and preventing disease. Teachers and pupils, under this system, place themselves passively in the hands of the health officer, without themselves having any active relation to the case. This must be the case, if the problem is to be solved at all from the standpoint of curative medicine, for the science of medicine remains today with a great deal attached to it which is vague and mysterious, that could not be taught in the schools or understood by the pupils; and all the skill of the trained physician is required to cope with the evil. Under this system it is frequently the case that the schools have to be closed, and serious interruption of their work results.

But there is a science of the prevention of disease, a science somewhat simple in its principles, and so clear and manifest in its practical application that all may participate in the work and contribute to the glorious end. And this intelligent and mutual co-operation of all classes of people is the one condition by which the great work is to be done. For example, consumption is a communicable disease which destroys 150,000 of the inhabitants of the United States every year, and yet the means for its prevention and final extermination are so well understood and so simple that young children can clearly apprehend and put them into successful operation. Hence it is of much greater importance that the problem, enlarged so as to include all communicable diseases, should be studied and acted upon.

From the standpoint from which this paper is written, it will not do simply to study diseases with reference to their being "school diseases;" and, again, it would fall far short of the end to be desired, if "medical inspection" should be the one means employed for the restriction and prevention of communicable diseases.

The solution of the problem by which public schools may not be interrupted by epidemics of disease, and, at the same time, the health of the pupils and patrons alike be preserved from the scourges of consumption, scarlet fever, diphtheria, and other communicable diseases, will have been made when there can be secured the intelligent co-operation of pupils and teachers, patrons of the school, and all other citizens, and these aided and directed by an efficient public-health service.

I desire especially to call attention to what may be called the "Michigan idea" concerning the successful solution of this important problem. By a law of the state, enacted some four years ago, it is decreed that "there shall be taught in every year, in every public school in Michigan, the principal modes by which each of the dangerous communicable diseases is spread, and the best methods for the restriction and prevention of each such disease." By the same law the state board of health is required annually to send to the public-school superintendents and teachers thruout the state printed data and statements which shall enable them to comply with such act. Such data have already been furnished, and other and more complete information will be given to the teachers during the coming school year.

Some reasons why it is believed that in time many of the important communicable diseases may be destroyed are:

First, the science of bacteriology has made known the specific cause of many of the dangerous communicable diseases, and this knowledge has made clear the methods by which their spread may be prevented, thus causing the saving of hundreds of lives of those who would otherwise fall victims to them.

Second, the methods by which this work is to be done are so simple that school children can easily learn them, and thus be led willingly to co-operate with their parents and health officials in the great work.

Consider for a moment what needs to be done in order that the schools may go on continuously and yet not be centers of infection from which dangerous disease shall spread. First of all it is essential that the school and health authorities of the city be alert to the fact that the school, in the very nature of the case, is the most certain center of infection ever established in the community. Careless and ignorant parents allow their children to come to school while they are yet in a condition to communicate disease to others. The need of medical inspection of schools can be clearly seen by the study of the fact just stated, and that fact is the complete justification of municipal or school authorities, when money is expended for this purpose. When a given case is one which involves serious danger to the community, steps must be taken to see that in no way does the disease spread.

Two important general principles are acted upon. First, we quarantine all sick. We also isolate the well who have, in any way, had contact with the case. In many cases this means the closing of the schools; but, on the other hand, it can plainly be seen that, had there been a general education of the people concerning the danger of allowing those who have been sick to mingle with others, the pupils would in all cases be kept at home and in quarantine, until such time as it would be safe for them once more to attend school. The result would be, there would be no further spread of the disease, and the schools would not be interrupted in their work. The result of such a combination of circumstances in my own state of Michigan, in any one case of scarlet fever or diphtheria, would mean the saving of more than ten cases of sickness and one or two deaths, and if this were constantly repeated, it would mean that in a single year some thousands of cases of sickness and scores or hundreds of lives would be saved. What I want to make clear is that the far-reaching results growing out of thoro isolation of the sick, during the period of sickness, are so obvious and so simple that they may be taught to the pupils in our schools, and thus they, and thru them their parents, may be brought to a hearty co-operation with all measures looking to the great end.

The second important general principle by which the spread of disease is prevented is the complete disinfection of all infected material. Now, disinfection, in part, is work which should be intrusted to the hands of an intelligent and efficient health officer, and hence might be thought not to have any practical relations to the schools. This is all that is usually done. At the same time there are many minor details, in the successful disinfection of all infected material, which must be observed and carried out by the people themselves; and hence, again, the need of popular education on the subject.

Take a concrete example and study it somewhat in detail, in order better to understand the general problem. There is always danger that one or the other of the most pronounced school diseases, scarlet fever or diphtheria, exists to a greater or less extent. In this connection I desire to call attention to the statistics of sickness from diphtheria in the state of Michigan during two periods of years, 1877–81 and 1887–91, indicating what percentage of all reports received stated that the presence of diphtheria was then under the observation of the physicians reporting. They represent an aggregate of seventeen thousand weekly reports of sickness received by the state board of health for the first period, and twenty-four thousand for the last period. In order that the facts may be quickly and easily comprehended, all these reports have been averaged by months, and a curve traced showing the relation of sickness from diphtheria month by month. A study of this diagram shows that invariably thru all these years the month of August has shown a marked increase of sickness from this disease, and during the following month of September a still greater increase is shown. Now, it is well known by sanitarians that, while this disease is caused by a specific organism, the Klebs-Loeffler bacillus, the disease is governed largely by climatic conditions, by the throat irritants in the air—coldness, dryness, wind, and ozone—except that, immediately after school opens in September, the diphtheria is not quantitatively related to these throat irritants. Now it must be believed, and it is believed, that to the opening of the schools is directly traceable this marked increase in sickness. Scarlet fever, studied in the same way, shows the same result. The disease continues to increase until October, but by this time the citizens have occasion to become generally alarmed, the attention of the board of education is called to it, the aid of the health authorities is called for; it may be the schools are closed and the epidemic checked. It is equally significant that the diagram shows that there is the least sickness from diphtheria during the vacation months of June and July.

The superintendent and teachers of the public schools ought always to be observant of every indication which points to a possible outbreak of these diseases in the schools. Plainly, it would be decidedly advantageous if the teachers and the pupils had had some training in the premonitory symptoms which precede the outbreak of scarlet fever or diphtheria. If suspicion arises that such disease does exist, if a child is noticed with sore throat, flushed face, suffused eyes, or other symptoms, the safety of the entire school would suggest that such a case should at once be sent home with a note warning the parent to call a physician and take proper steps quickly to quarantine the patient, and to take other necessary precautions. Here again, in order that the child may be willing to obey and the parent to co-operate, an intelligent appreciation of the necessity for such steps should be possessed by the pupil as well as the parent. They can and ought to know all the fearful consequences which may result from disregard of prompt and effective measures for the prevention and further spread of the disease, and at the home the case is much more easily managed, thru all the details of isolation and disinfection, if there be on the part of child and parent proper knowledge as to the reason for each step taken. In a word, by having taught the subject in the schools, adapting the instruction to the grade of the pupils taught, and continuing the work thru a generation, if necessary, ignorance, which is the ally of superstition and recklessness; ignorance, which disregards all precautionary measures and all consequences which may flow out to do harm to others, is exchanged for intelligence, and intelligence carries with it a willing co-operation of all concerned, the end of which is the restriction of the scarlet fever or diphtheria to the first case, and the saving of untold sickness and death. The experts know enough in regard to all these questions, but they must be understood and acted upon by the common people.

And there is ample justification for the suggestion that school authorities should turn their attention to this subject and enter energetically upon the work of the education of the people along these lines. Hundreds of pupils who, under existing circumstances, are compelled to pass thru their school course suffering from the sequelæ of one or more of these diseases which, according to the traditions of the past, have been considered as the inevitable experience of every child — hundreds of pupils in our schools are today suffering from throat affection, impaired vision, defective hearing, diseased nervous system, which have come to them because of having had to pass thru diseases which ought to have been prevented, but were not.

It ought to be said that the teaching of sanitary science in the public schools does not necessitate the teaching of any of the deep and mysterious phases of disease such as characterize the study of medicine and its mission in the world of curing disease. Sanitary science does not concern itself in the least with the cure of disease. Practical sanitation is as far removed from the domain of curative medicine as the east is from the west. The principles of practical sanitation, let it be repeated, are simple in their application, easily understood by young and old, and the great scourges which now afflict mankind—consumption, with its 150,000 victims each year in the United States; diphtheria, carrying away 60,000; scarlet fever, 40,000; a like number from typhoid fever—all these and many others might be destroyed from the face of the earth, and man be permitted to live his allotted time and die only from old age.

One other point I would suggest and emphasize, did time permit, viz., that a somewhat radical change be made both in the matter and in the method of teaching what goes by the name of hygiene, or, as I prefer to call it, sanitary science. As I have had occasion to say in another place, "I think there can be detected a considerable reaction against the methods of teaching which have heretofore been used in anatomy and physiology. Some knowledge of anatomy and physiology is the proper foundation for those lessons which qualify one to shun the dangers to life and health in his surroundings, but it is understood that anatomical teaching is carried forward solely with the thought of its subservience to physiology, and the latter subject, in turn, is taught largely with reference to its practical relations to personal and public hygiene." In addition to this, I would have every child in our public schools taught the facts concerning those communicable diseases which are dangerous to the public health, the germs which cause them, their modes of spread, and the method of the prevention of each such disease.

The ideas thus briefly outlined in this paper have been enlarged upon in the following papers:

"Better Methods of Teaching Hygiene." Supplement to the Annual Report of the Michigan State Board of Health, 1894.

"A Plea for the Teaching of Sanitary Science in Our Schools," *Education*, Vol. XVII, pp. 266-75.

"Sanitary Science in a College Course," Transactions of Michigan State Teachers' Association, 1896, pp. 80-86.

"The Teaching of Hygiene and Sanitary Science in the Secondary Schools," *School Review*, Vol. VI, pp. 66-74.

MEDICAL INSPECTION OF SCHOOL CHILDREN

BY SEVERANCE BURRAGE, INSTRUCTOR IN SANITARY SCIENCE, PURDUE UNIVERSITY, LAFAYETTE, IND.

No one more than the superintendent or teacher realizes what a glorious place the public school is for the spread of contagious disease. School epidemics are quite common; and yet it cannot be denied that in most cases, if ordinary precautions are taken, these epidemics, as such, can be prevented. It is not often that the teacher is at fault, however. It is thru ignorance and carelessness of the parents, and because of insufficient sanitary regulations on the part of the public authorities, that the epidemics prevail.

An epidemic may originate either from within the school, directly or indirectly from some sanitary effect about the building, or from without the school thru the agency of infected children or teachers.

When an epidemic has broken out, extraordinary or heroic measures are necessarily taken to check its spread and to prevent its future outbreak. If the trouble is in the sanitary condition of the building itself, the school may have to be closed for repairs or renovation. If it is brought in by the pupils, a most careful isolation, quarantine, and fumigation, with perhaps a temporary closing of the school, may be necessary.

But, looking at the subject from the standpoint of the sanitarian, it is our great desire to prevent these diseases altogether, particularly in epidemic form. This being the object, we must observe a number of ordinary precautionary measures continuously, such as a regular sanitary inspection of the building, resulting in the proper cleansing and airing before the beginning of the school year, and the subsequent cleaning and, perhaps, fumigation at regular intervals; providing the scholars with a pure water supply, and distributing the same in a safe and proper manner; maintaining good sanitary arrangements; keeping the amount of floating dust and dirt down to the minimum, perhaps by the use of some form of "dustless" oil on the floors; and, in short — assuming, of course, that the school building is properly constructed, ventilated, heated, and hygienically furnished — every precaution should be taken to keep the children in that vigorous and healthy condition in which they are least susceptible to disease of any kind.

But more immediately effective than any of the above precautionary measures is the medical inspection of the school children. While only practiced by a very few of our larger cities, it has worked so well there that we can no longer regard it as an experiment.

The aims of the system are, first, to discover cases of contagious disease at the schoolroom, and to send such cases to their homes before they have done mischief; and, second, to obtain better isolation by keeping these cases at home as long as the period of possible infection lasts.

Daily medical inspection has been in operation in Boston since November 1, 1894, and it will be instructive to use the words of Dr. Durgin, chairman of the Boston board of health, to describe exactly how the system is worked:

> The board of health divided the city into fifty districts, giving an average of about four schoolhouses and fourteen hundred pupils to each district. No difficulty was experienced in finding well-qualified and discreet physicians who would undertake the

duties prescribed; and the board selected and appointed one physician for each district, with a salary of $200 a year. His duty was to make a visit to each master's school daily, soon after the beginning of the morning session. The master receives from each of the teachers in his district early reports as to the appearance of illness in any pupil in his charge. These reports are given to the visiting physician, who at once examines the reported children and makes a record of his diagnosis and action in books furnished by the board of health for this purpose, and kept in the custody of the master. If the visiting physician finds the child too ill, from any cause, to remain in school, he advises the teacher to send the child home for the observation and care of its parents and family physician. If the illness is from a contagious disease, the child is ordered home and the case reported to the board of health. The disposition of the sick child while at home, and the proper isolation in cases where contagious diseases develop in such children, as well as giving them a warrant for returning to the school, depend principally upon the report of the school inspector.[1]

Inspectors are not allowed to give professional advice or treatment in any case, with the exception given below, and great care is necessary to avoid giving offense to the family physician. This one exception is in connection with pediculosis, which was found to be so prevalent thruout the schools, existing in one instance to the extent of nearly 80 per cent. of scholars in one building. The board of health did recommend an economical wash or remedy for this trouble, but not without some friction on the part of the families whose children had to be advised to use it. Obviously, medical inspection requires the thoughtful co-operation of the teachers, and a generous amount of tact on the part of the inspectors.

It is a comparatively simple matter for the teacher to recognize an "ailing" pupil, one who does not appear as bright and responsive as usual, and the process of reporting such cases to the master can occupy but a few moments at most. It would seem, after conversing with several of the Boston teachers, that they found but little objection to the system on account of the time it required of them, and they did not hesitate heartily to commend it. They did say — and, of course, we would naturally expect — that very much depends on the personality, the disposition, and the tact of the medical inspector. On the other hand, some parents have taken the stand that boards of health have no business to prevent these children's diseases in this or any other way; that they wish their children to have the measles, scarlet fever, etc., while young, and thus have it over with. But taking into account the very great difference in degree with which different children are affected, and the serious results which commonly follow many of these diseases, such as deafness and blindness, to say nothing of those cases which result fatally, I feel that the authorities are justified in taking this and every other possible precaution to prevent their spread in our schools. I can see no reason, within the bounds of common sense, for commending such a stand on the part of the parents.

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[1] Paper read at annual meeting of the Massachusetts Medical Society, June 9, 1897, by Dr. Samuel H. Durgin.

The extent of the work already done may, in part, be shown by the following figures:

For the fourteen months from November 1, 1894, to December 31, 1895, in Boston, 16,790 children were reported by the teachers and examined by the medical inspectors. Of these, 6,035, about 36 per cent., were found to be not sick; 10,737, the other 64 per cent., were ill. Of these, 2,041, or 19 per cent., were sick enough to be sent home. About 22 per cent. of these sick ones sent home, or 2.7 per cent. of the total number examined, proved to be cases of infectious disease, specifically as follows:

	Cases
Diphtheria,	77
Scarlet fever,	28
Measles,	116
Chicken pox,	28
Mumps,	47
Whooping cough,	33
Pediculosis,	69
Scabies,	47
Congenital syphilis,	8
	453

In 1895, 8,964 scholars were examined; 1,156, over 12 per cent., were sent home; and 23 per cent. of those sent home, or 2.9 per cent. of those examined, were cases of infectious disease.

In Chicago similar work was inaugurated in September, 1896, altho greatly abbreviated by lack of financial support from the city. Dr. Reynolds, health commissioner of Chicago, informs me that he knows "of no other single line of effort in which his scanty force of inspectors has engaged that has been of more obvious and direct benefit to the community in general, as well as to the school children themselves."

During the school year 1896–97, in Chicago, even with their small force, 1,181 visits were made to the schools; 4,023 cases of contagious and infective diseases were located and taken charge of for preventive purposes; and insanitary conditions in sixty-three public schools were reported to the board of education, and similar conditions remedied in fifty-three homes of patients.

In the first three months, in New York, 63,812 children were examined, and over 6 per cent. were excluded because of contagious disease.

In several other American cities the introduction of a system of medical inspection has been under serious consideration, but, as far as I know, it has been in active operation only in Boston, New York, and Chicago. By this I refer to an extensive system covering the whole city—as it is a well-known fact that some individual schools have been for a longer or shorter time under medical supervision in other than the above cities.

There is absolutely no reason why its introduction should be confined to large cities. The fact of the matter is that it would be very much easier to introduce, and much cheaper to operate, in smaller cities and even in towns, and as a system it would be just as effective.

As to the expense of the system, it seems to me slight in comparison with the enormous benefits that result from it. If railroad companies find it economical to spend thousands of dollars for the analysis and supervision of the water supplies of their employees, believing that they can get more and better work from healthy workmen, why should not towns and cities get much better educational results from healthy teachers and scholars, which they almost insure by spending some money for sanitary improvements and medical inspection ?

It is impossible to estimate the extent of prevention which has already resulted from this system, but the figures cited above, particularly the specific infectious diseases which were eliminated at once from the schools and placed under proper care, supervision, and isolation, give us an idea, at least, of the great value to the school and to the community. Take alone the seventy-seven cases of diphtheria which were sent home the first year in Boston — we can simply ask the question, How many more cases did this early separation prevent ?

That there has been a demand for something of this sort abroad is shown from the following extracts from the Berlin letter to the *Medical Record* of date January 22, 1898 :

Public meetings were held at Berlin after a serious epidemic of measles, in which three-fourths of the scholars of the local academy suffered because the school was not closed. These meetings resulted in the passing of resolutions as follows : "Laymen and physicians demand that each school have a physician assigned to it, to have charge of the general hygiene of the building and be watchful over the health of scholars ; to see to the proper heating, ventilation, cleanliness, and, if necessary, disinfection of the building ; to order the closing of the school when the heat becomes excessive and in time of epidemics ; furthermore, to examine new scholars ; in short, the school physicians should protect the scholars against the dangers of school life."

Altho this is not at all similar to our systems in its details, it shows that the need of something of the kind is widespread.

Besides being a most valuable preventive measure against the fostering and spreading of contagious disease, medical inspection may be looked upon as a most important factor in the education of the children and their parents on sanitary matters. Its operation also brings before the health authorities, in a very emphatic manner, several needed reforms and improvements, such as a sanitary inspection of school buildings and their surroundings, entirely apart from the medical inspection ; the examination of the eyes and ears of the scholars, and humoring the weak ones as far as possible by seating in most favorable locations, according to their weaknesses; and the introduction of bathrooms in the schools, as so many of the children do not have access to the proper bathing facilities.

While not intending to lose sight of many of the other features of school hygiene and sanitation, nor detract from their value and importance, it is the purpose of this paper to emphasize above all this matter of medical inspection, as it is one of the greatest preventive measures so far devised. It has been highly commended by all thinking people who have seen it in active operation, especially by teachers and physicians. Realizing its importance to the health of a community, as well as its great educational value, and feeling that untold benefit can come from a more widespread introduction of it in one form or another, the writer does not hesitate to commend the matter of medical inspection to this conference for its thoughtful consideration.

DISCUSSION

B. A. HINSDALE stated that he had understood Professor Burrage to say that it would be easier to secure needed medical inspection of schools in the villages, towns, and smaller cities than in the larger cities.

PROFESSOR BURRAGE said this was a correct representation of what he had said.

MR. HINSDALE said he could not assent to this view. In the communities referred to the sentiment and practice of individualism were developed to a remarkable degree. The people were very democratic. They were not so accustomed to feel the pressure of what is called the "social whole" as the people of the larger cities, and did not so well understand it, its value, and its necessity. The communities that he referred to were not prepared to accept measures that large cities accepted as a matter of course. This fact might be the best of all reasons why the campaign of education should begin at once and be carried on with vigor, but it was certainly a conclusive reason why it should be undertaken and be conducted with prudence, tact, and wisdom.

DR. FALL, in response to a question asked by Dr. Henry E. Dawes, of Omaha, emphasized the necessity for teaching the simple means of quarantine and restriction.

W. E. SHELDON urged more attention to this subject, such as creates public sentiment in favor of medical inspection which will control these conditions and secure legislation, adding that the real way to get public sentiment is to educate the children.

JOHN W. COOK spoke of the difficulties in the towns of from 800 to 1,000 persons, owing to the absence of available systems of waterworks, of sewers, etc.; and also called attention to the aid which can be secured from intelligent local physicians.

THE HYGIENE OF INSTRUCTION IN PRIMARY SCHOOLS

BY DR. G. W. FITZ, ASSISTANT PROFESSOR OF PHYSIOLOGY AND HYGIENE, HARVARD UNIVERSITY

The topic "Hygiene of Instruction" is so broad that in the short time at my disposal I wish to limit myself to a consideration of one phase only of this subject—the "Hygiene of Instruction in the Primary School."

We are brought here at once face to face with one of the most vital problems of our educational system. The primary school receives our children at a critical age. It lays the foundation of their future physical and mental development; it determines, many times, their moral attitude as well. We cannot question the right of the primary school to exist; that right it has long since proved. That it has grave faults, however, is apparent to anyone who has seen and studied the actual conditions. Why is it, as the school year progresses, the children become less attentive, less able to grasp relations and to memorize simple statements of facts? Why does anthropometry show that growth takes place largely in the vacation and is retarded during the school year, and that children of seven years of age who have not attended school are taller and stronger than school children of the same age? Why does the specialist find that the nerve signs in children increase in proportion to the effort necessary to do the school work?

Why is it that young teachers break down with nervous exhaustion within the first six years of teaching? Why is it, in short, that school is a treadmill in which the natural curiosity, interest, and health of the child are so frequently lost, the ambition and the enthusiasm of the teacher killed?

If we turn to the teacher for the solution of these questions, she tells us frankly: "We are forced to press the children beyond their strength. Our problem is, how shall the children, coming from the freedom of the home, be brought to undergo the grind of routine work, and the general advance of the class kept to the standard of school superintendent or school board? We see our way clear to but one method — discipline the children and make them work."

The grammar-school teachers claim that the children are sent to them too immature to do good work, and we hear the echo of the same criticism from the high school, and later from the college, that the young men come with undeveloped powers of observation and description, with no method of study or ability to concentrate. The college lays the blame upon the high school, the high school upon the grammar school, the grammar school upon the primary, and the primary is now laying it upon the home.

The parents ask: "What can you give us so good as school? It is a means of securing the full intellectual development of our children, of having them looked after under pleasanter conditions than at home, and, finally, of getting rid of them during the busiest part of our day."

These answers offer no solution. The problem has been recognized by educators, and they have made many attempts at correction. The school program has been pronounced poor, and efforts have been made to enrich it. The work has been pronounced abstract, and object-lessons have been introduced; uninteresting, and bright colors, varied shapes, pictures innumerable have been rushed upon the child, until it has been bewildered by the multiplicity of detail and further exhausted by the demand for more discriminating attention.

The fundamental difficulty has been that too much was required of the child in the beginning, and the attempt at enrichment and greater variety has but increased the burden. Little or no effort has been made to diminish the old work that room might be made for the new, or to give adequate physical exercise and insure fresh air and sunshine to all pupils. The result is that the minds of the children are in a state of constant over-pressure in the effort to accomplish the many-sided daily program presented to them, and their bodies are weak and poorly developed.

In considering the hygiene of this instruction, it is essential to consider in detail the teaching of reading, writing, and arithmetic, since these form the classical foundation of all instruction and the backbone of the primary-school program.

Reading has ordinarily been made to include all the steps leading to the acquiring of the English language. This is natural, since the ability of the child to read is the most tangible measure of his advancement in the use of his native tongue. Reading has thus been made to take the place of oral descriptions of interesting natural objects, of personal experiences, of oral reproductions of stories, all of which would give him the power of coherent logical description. In learning to read, the child is introduced at once to arbitrary, conventional symbols, which have no natural relation to the sounds he has already learned as labels of things. The whole process is of the nature of a puzzle, and in itself is not educative. Not reason, but convention, is the key to the puzzle. The solution lies in the memorized association of symbol and sound. The child of six or seven is so limited in this power of conventional association that he learns to read with extreme slowness, and is of necessity restricted to such simple words and phrases that he has none of the stimulus of interest. "The dog is black. The dog has four feet," is as uninteresting to him as to you and me. Experience has shown, over and over again, that the child who begins to read at eight years is in no wise handicapped in his later educational progress. He has the inestimable value of the advantage of intense interest, roused by his sense of power in unlocking the secrets of books and papers after the fashion of his elders. Increased maturity makes the slow, irksome task pleasurable and easy.

Writing presents difficulties similar to those of reading, inasmuch as it involves the use of the same arbitrary symbols. This is, however, intensified by the required drawing of the conventional forms of the letters. This drawing is made still more difficult by the fact that the smallness of the letters necessitates a muscular control of which the child is relatively incapable. When to this is added the new requirement of making the first attempts with pen and ink, the difficulty has become enormous. It is undoubtedly true that the effort at fine co-ordination demanded of a young child by writing with a pen leads to a degree of nervous exhaustion unapproached by other school work. Many a teacher has come to feel that the pen in the hand of a child is, indeed, mightier than a sword! A rational substitute for this, which may be made of high educational value, is blackboard drawing and picture writing, which the children so enthusiastically undertake whenever an opportunity is given them.

Arithmetic has been considered of such great importance in the education of the child that in many schools it is made the sole criterion for promotion. In the primary school a consistent effort is made, from the entrance of the child at five or six years of age, to train him to recognize number relations, concretely or abstractly, and to build on these the logical superstructure of arithmetic. Most teachers confess that, in spite of the effort to make the number and arithmetic work concrete, it becomes essentially abstract, and a mere matter of memory, because of the immaturity of the children. They are unable to grasp the numerical relations involved, and the drill, which makes it a pure exercise of memory, becomes necessary. Much of the aversion to arithmetical problems found later is undoubtedly due to the disheartening drill of this primary work. Here again the child who begins arithmetic at eight or ten years of age finds himself able to take it up quickly and has the liking for it that easy mastery always gives. Manual training undoubtedly offers the best opportunity for the concrete teaching of arithmetic which we possess, and has the double advantage of making it vivid and at the same time incidental to interesting exercises.

Besides these classical subjects, many schools have introduced what is called nature work, which includes the study of geography, plants, and animals. This has formed the most important part of the materials offered for the enrichment of the school program and has met with success in some schools, with failure in others. It offers wonderfully valuable and interesting material for awakening the intellectual activities of childhood, and it cannot fail to take a high place in the curriculum of the primary and grammar schools. Its material for study and description is unlimited, and yet its demands upon the child may be perfectly adapted to his power of observation. In its broadening and humanizing influence it is probably superior to all other subjects.

Another, not less important, enrichment of the school program has been the introduction of physical training. In most schools, however, the already overcrowded program has left so little time that it has frequently taken the place of recess or has been made wholly insignificant in the week's work. In considering physical training we must remember that physical activity is the supreme factor in the development of the child; that during the age of primary-school attendance growth is rapid, and the stimulus of exercise is essential. It may be justly claimed that the child gains more educationally in the first eight or ten years of his life and lays a surer foundation for the mental and physical health of after-life thru vigorous, unrestricted physical activity than thru any other factor whatsoever. By this I mean spontaneous play under favorable conditions, with accompanying fresh air, sunshine, and good food, supplemented and enriched by gymnastics and athletics, including swimming. I do not mean that nervously exhausting and deadening drill known as the Swedish gymnastics, which, in the name of educational gymnastics, adds fatigue to fatigue, by taking the initiative away from the child and forcing him to pay constant and close attention to the orders of the teacher, that he may execute with precision entirely uninteresting and conventional movements.

> The plays and games of childhood present ever-varying conditions, constituting both mental and physical problems of the highest educational value. The child is habituated to make rapid judgments in the face of changing conditions. He must be constantly on the alert, must perceive conditions as they are, must immediately adapt his own action to their quick-changing relations, and, as a result, he gains that perfect control of his body which serves him throughout life. As teachers, we must recognize that the judgments upon which all these active movements are based are intellectual operations. In play the child is the unit of force; he initiates his own conditions. His limitations are self-imposed. His self-control lies in execution rather than in inhibition. He is concerned with self-expression rather than with self-repression. Play thus relates itself to the truest conception of education, the development of power—the power of the individual to act as a self-directed unit in the community.[1]

Besides plays and games, physical training rightly includes manual training, gymnastics, and athletics. Manual training presents such a variety of problems in selection of materials, choice of tools, size, number, and form of pieces, and methods of construction, all of which enlist the deepest interest of the child, and seem to him to be play, that it is at once the best educator of brain and hand, and makes the acquirement of arithmetic, reading, and writing a conscious necessity. The work can be adapted to the power of the youngest child, and made to present problems of perception, judgment, and muscular co-ordination of steadily increasing complexity.

Gymnastics are also necessary, that the physical activity of the child, restricted by convention or environment, may be made adequate to insure complete growth. To be educational they must constantly enlarge his experience by the presentation of progressively fresh physical problems. Set drills and conventional movements may be of value hygienically or for correcting deformity, but cannot be considered educative. In view of the importance of physical activity for the development of the child, both mentally and physically, we must agree that physical training should take first rank in primary-school work, and that at least half of the entire school period should be devoted to its various phases. This apportionment of time has important confirmation from various quarters, notably from the experiment necessitated in Philadelphia by the crowded condition of the schools. The pupils who attended school half time apparently accomplished as much as the others, even under conventional methods of instruction.

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[1] "Play as a Factor in Development," *American Physical Education Review*, December, 1897.

After what I have said, it seems unnecessary to mention the hygiene of discipline, that fetich of the old school ideal. The child is self-disciplined when he is held to his work by the reflex attention of interest. This can always be secured when the work is within the grasp of the child; when he has the sense of power which comes with easy conquest; when he is not exhausted by the imposition of a sequence logical to the adult, but incomprehensible to him; when his attention is not dulled by a demand for observation continued beyond a physiological limit.

Pleasure in success will ever be the child's stimulus to effort. Joy in effort is for the mind trained by successful effort, and should be the end sought by all teachers for their children.

In conclusion, I would suggest for your consideration the following propositions:

1. The mental effort of which the child is capable is primarily connected with physical activity and with sense-perceptions.

2. The physical activity most needed by developing childhood is not found in formal and artificial systems of exercise, but in plays and games, in the various occupation imitations of childhood, in gymnastic games, and in the progressively difficult demands of well-directed manual training. These present mental as well as physical problems, fully adapted to the child's stages of development, and insure adequate mental and physical growth up to the age of eight or ten.

3. The conditions favorable to the mental development of a child seven years of age are not found in arithmetical processes, but in concrete number relations; not in the science of language, but in its use; not in the use of symbols, as in reading, nor in the efforts at fine motor co-ordinations, as in writing with pen or pencil, but in drawing and picture writing on the blackboard, in gymnastics and manual training, and in the fascinating study of plants and animals.

4. The wholesome development of the child's nervous system depends upon maintaining his interest in school work, fostering and directing his spirit of inquiry, and satisfying his love and need of activity. Substitution and suggestion must take the place of prohibition and repression. The true discipline is the self-control of interest.

5. The teacher must not be misled into demanding logical sequence

or continuity from the child. Superficiality is both the safeguard and the stimulus of childhood.

6. Not less than one-half of the school time of the primary-school pupils should be devoted to physical activity in its various aspects, and the remaining time should be devoted largely to nature work, drawing, oral description, and oral reproduction.

7. The child's increase of mental power is not in proportion to the mental effort he is forced to make, but is largely determined by natural physical growth.

8. The final test of primary-school work must be — is it joyous? does it give full scope to the play impulse?

FATIGUE

BY PROFESSOR EDWARD R. SHAW, DEAN OF THE SCHOOL OF PEDAGOGY, NEW YORK UNIVERSITY

The president of the Council asked me to go over the investigations that have been made on mental fatigue and to prepare therefrom a paper for this meeting, putting before you whatever there is of practical value to educators as the outcome of those investigations.

The question of mental fatigue with school children concerns itself with the work that may be put upon the nerve centers, so that their change toward more complex modifications of structure thru function, and also their interaction, may not be interfered with, and may not impair the highest power of efficiency that these cells are potentially capable of performing.

The acquiring of a new process of thought uses up energy very rapidly, much more rapidly than those who teach are likely to realize. When intellectual application on the part of the pupil is carried beyond a certain point, under such conditions not only is more lost than is gained in establishing the desired process of thought, but the nervous mechanism receives impairment from which it must recover. If the too great intellectual application on the part of the pupil goes on day after day, permanent injury is done to the nervous mechanism. This may show itself in the difficulty with which the mind can do mental work, and in its inability to acquire more complicated thought processes, or in some pathological condition.

The studies which have thus far been made to determine mental fatigue divide themselves into two main classes. The first class comprises all those investigations — such as those made by Burgerstein, Bolton, Holmes, Höpfner, Friedrich, and Ebbinghaus — in which some formal exercises—as, for instance, addition and multiplication of figures, memory tests, replacing words and letters which have been omitted from sentences, and the bisecting of lines—are used as tests. The index of fatigue is measured, it is assumed, by the number of errors and inaccuracies made. These investigations have been carried on with great elaboration, involving enormous detail in collating the errors. It is not necessary to go over the ground of all these investigators. The last investigations of this class were those of Friedrich and Ebbinghaus, and these, having been made in the light of the experience of previous investigators, embody what is best in their methods and results.

Friedrich's investigation involved, first, the dictation of twelve easy sentences of about three hundred letters each to fifty-one children in the fourth school year, averaging ten years of age. His second tests were examples in addition and multiplication. The number of errors were taken as the index of fatigue. The tests were made in the regular school hours from 8 o'clock to 11 o'clock in the morning, and from 2 to 4 o'clock in the afternoon. His conclusions were, substantially, that the quality of the work done by pupils decreased with the increase of hours at school. He found the best work at the beginning of the school session and the poorest at its close. He found, further, that the quality of the morning work was better than the quality of the afternoon work, and that three hours of noon intermission were not sufficient to restore the freshness which pupils showed at the morning tests. He found at the close of the afternoon that children were in a worse condition, so far as fatigue is involved, than at the close of the morning session. Some of his tests were made after pupils had been given a fifteen-minute recess at the end of the hour; some of his tests were made after two recesses of fifteen minutes each at the end of each hour. The influence of the recess was, in every instance, found to increase the quality of the work, and in three hours' session the two recesses increased the quality of the work more than the one recess. His practical recommendations were that short, intensive periods of study are better than long hours, and that a recess in the lower grades of from eight to fifteen minutes should be given every sixty minutes.

The investigation of Ebbinghaus was made in Breslau upon twenty-six classes of boys and girls, ten to eighteen years of age, in the schools of that city. Tests were made on three Wednesdays a fortnight apart. The tests were made to determine the effect of the five hours' continuous school session upon children. In making tests, Ebbinghaus adopted the method of Griessbach as to the time of making the tests, placing these at the beginning of school and at the end of every hour. There were three kinds of tests: First, easy passages of prose were printed on slips of paper. In these passages, words, syllables, and letters were deleted and the omission marked by a dash; the pupils were required to fill in these blank spaces. Five minutes was the time devoted to each test, and the amount of work done by pupils and the number of errors made were taken as an index of fatigue. The second test was a computation of figures after the method of Burgerstein. These tests continued ten minutes. The third test was a memory test according to Bolton's plan. The monosyllabic names of the German numbers one to twelve were arranged in miscellaneous order, and series of these were read to pupils, the pupils being directed to write down what they could remember. Each of these last tests continued from four to five minutes. By computation of the results of the test like that of Burgerstein, the increase in the number of errors from the first test to the last test was as one and one-tenth to one and nine-tenths. Roughly stated, twice as many errors resulted from the last test as were found in the first test; but there was an increase in the amount of work. These results agree, in the main, with the results of Burgerstein's investigation; that is, an increase in the number of errors and an increase in the amount of work.

By the method of filling the places of deleted words, syllables, and letters, the results of fatigue were more decidedly indicated than by the computation method. But by the memory method of Bolton, the errors at the end of the fourth or fifth hour were less than the errors at the end of the first and second hours. The results of Ebbinghaus' investigation of fatigue are vitiated, it is held by some, because of excitement on the part of the children, due to a rumor which had spread among them to the effect that the restoration of an afternoon session depended upon the results. From my own experience in finding that excitement on the part of pupils vitiates the data, I am inclined to attach considerable importance to this point that is made against the returns of Ebbinghaus' investigation.

The second class of investigations into mental fatigue, as those of Griessbach and Vannod, seeks to determine the presence and degree of fatigue by testing the sensitiveness of the skin to perceive the distance apart at which the points of a pair of compasses may be placed and be distinguished as two separate points. The tests of the sensitiveness of the skin by these investigators were made upon the medium line of the forehead, upon the extremity of the nose, upon the cheek or the cheek bone, upon the edge of the lower lip, and on the ball of the thumb and of the index finger. Griessbach made his investigation at Mülhausen, and Vannod upon children in the schools of Berne, Switzerland. Vannod's investigation was concluded in 1896. His conclusions are almost indentical with those of Griessbach in finding that there is a decrease, a marked decrease, in the sensibility of the skin due to fatigue. He found, further, as did Griessbach, that the branches of instruction which especially exhausted pupils are mathematics and ancient languages. He found, besides, that the afternoon hours of study fatigue much more than the morning hours, and that giving the entire afternoon free from study to pupils generally produces a return of the sensitiveness of the skin to the normal. Lastly he found that written examinations lasting from 7 o'clock in the morning until noon decreased very considerably the sensitiveness of the skin, and that even five hours of rest following such an example failed to bring the sensitiveness of the skin back to the normal.

In a work recently issued by Binet and Henri, *La fatigue intellectuelle*, Griessbach's investigation and also that of Vannod are indorsed. It would appear from all this agreement and testimony that in measuring the sensitiveness of the skin we have a reliable means, could it be easily employed, of determining fatigue. When, however, we study Griessbach's returns, one is led to believe that he made but one series of tests on a student, and his returns are so uniform as to excite our inquiry. Vannod's investigations, corroborating in their returns those of Griessbach, are open, in the light of experiments not yet published, and in the light of trials made in several psychological laboratories in test of the sensitiveness of the skin to determine fatigue, to great question as to their reliability.

In the July number of the *Psychological Review* Professor Cattell, one of our most careful and accurate investigators, says, in speaking of Griessbach's results, that he has entirely failed to confirm the enlarged sensation areas as found by Griessbach in the course of schoolroom work. The fact is that in measuring the degree of discrimination of one of the lower senses, as the sensitiveness of the skin, there is opportunity for great error due to suggestion. Anyone who has made such tests in the psychological laboratory will appreciate this statement.

What, then, has resulted from the investigations into fatigue, of practical value to us as educators? Thus far, I regret to say, very little of value.

1. These investigations force upon teachers an appreciation of the fact that there is such a thing as mental fatigue on the part of school children induced by the tasks put upon them and by an improper arrangement of the daily school program. This appreciation will, therefore, in some degree, lead teachers to be on the lookout to detect signs of fatigue and to use their best judgment in guarding against it.

2. The influence of recesses is to increase the quality of the work of pupils.

3. Short, intensive periods of study are better than long periods.

Pupils will, therefore, accomplish more and with less wear if the periods of work are short, and are each followed by a short recess in which the children are given full liberty for spontaneous physical activity.

It may be said, in conclusion, that investigations into fatigue have not been made upon pupils under ten years of age, the field where the light in this regard is most needed.

DISCUSSION

B. A. Hinsdale, in discussing the question of the age of children in connection with teaching the art of reading, said it was easy and dangerous to generalize too rapidly. Sweeping conclusions were sometimes deduced from single facts. He had himself had, as a student in an academy over which he once presided, a young man, aged twenty, whose education, in the conventional school sense, had been wholly neglected until he was ten or twelve years of age. Measured by the other pupils, this young man had not suffered in his education, for he was fully equal to the average student of his age, and, in fact, a little more than equal. Of course, it was impossible to tell what this young man would have done if he had been educated in the ordinary way. On the other hand, he knew people of fine cultivation who were put at their reading lessons, or who took up the subject for themselves, at an age so young that they could scarcely remember the time when they did not know how to read. Nor would it be true to say these persons had short memories. They had been perfectly able to read easy reading matter from the age of four or five years, at most. Very much depended upon the child, as well as upon the teacher, and the method of instruction.

William E. Sheldon alluded to the fact that, in homes of cultivation and intelligence, many children learn to read unconsciously.

John W. Cook thought it would be difficult to prevent children from learning to read at an early period.

H. H. Seerley requested Miss Dutton to recall to the Council her testimony on this subject, given at the meeting in Denver, in discussion of the subject "Economy in Elementary Education."

Miss Dutton added to this that, of a company of 200 pupils who had gained from one to three years in their elementary course, 95 per cent. had learned to read at an exceptionally early age.

J. F. Millspaugh asked Miss Dutton if these children had had kindergarten training, and was told that they had not. Mr. Millspaugh stated that in the schools of Salt Lake City exercises preparatory to reading were given the children at five and one-half years.

C. B. Gilbert emphasized the necessity of avoiding sameness and of holding the sympathy of the children in their work.

Mr. Cook asked Professor Fitz as to his approval of our ordinary school gymnastics.

Dr. Fitz replied that any exercise is valuable to a child which broadens his experiences.

THE NEW PSYCHOLOGY AND THE CONSULTING PSYCHOLOGIST

BY PROFESSOR JOSIAH ROYCE, HARVARD UNIVERSITY

There have been recently a number of discussions by very competent authorities concerning the present situation and prospects of the various studies and investigations that constitute what is often called the new psychology. It is perhaps presumptuous for me to undertake to add to the contributions to this topic. But as a student of general philosophy, and also as one interested in certain aspects of the new psychology itself, I have taken such interest in the recent controversies as to lead me to attempt, in the present paper, both a brief review of the general nature of our present problem, and a practical suggestion as to a way in which the new psychology may be aided in obtaining a more satisfactory relation to the practical profession of the teacher.

No one familiar with the literature of any of the recent types of psychological investigation can doubt that much, both of novelty and of value, is constantly coming to light in the course of the newer studies of the mental aspects of human nature. It is not surprising, therefore, that those who have practically to deal with the management of human nature, and that, above all, the teaching profession, should be encouraged to cherish very high hopes as to the practical service which may be derived from these investigations. On the other hand, as has lately been pointed out by various authorities, a good many of these hopes concerning what psychology, in the present state of its development, can already do to settle fundamental questions as to educational methods and ideals have been over-sanguine. The psychologist, whatever his specialty, has his own scientific tasks. The teacher, whatever his training, has his own plans, and must pursue, in the end, methods determined by these plans, and by numerous social interests with which the study of psychology may have little or nothing to do. The teacher hopes too much if he ventures to anticipate that the scientific study of human nature can, of itself alone, predetermine the whole, or even the most fundamental part, of what the teacher himself has to seek as an ideal, or of what he has to use as means for attaining that ideal. Over-sanguine hopes, however, may easily lead to correspondingly bitter disappointments. When you pursue a science for its own sake, you do not thereby make it certain in advance that any specific practical purpose is certain to follow from such discoveries as you have made at any particular stage of your scientific research. This incongruity between the purposes of a science and the undertakings of an art is in other branches of human endeavor a familiar fact. The theoretical study of electricity went on for a long time before modern electrical engineering was in existence, or was even a very near and reasonable hope. Yet, in many such cases, patient waiting has been rewarded; and, just as truly, over-hasty hopefulness has often been disappointed. Now, in the study of psychology, as it is at present going on, the situation at the moment is, in many respects, similar to the situation in physical science when the electrical phenomena began to receive the attention that they obtained during the first half of this century. Or, again, the situation is somewhat similar to what it was in physiology at the outset of the researches in experimental physiology that went on in the first half of the present century. Anyone duly acquainted with the present undertakings of modern psychology ought to agree that these undertakings must in the end prove as important for our dealing with human nature as those physical and physiological researches have proved in other modern arts. But, on the other hand, it is perfectly true that the psychologists themselves have a right to pursue these lines of research without being continually interrupted by over-hasty demands for practical results. It is equally true that no immediate and fundamental revolution in educational methods and ideals can be said to be warranted by what is at present known thru the newer psychological researches. One who discusses the relation between psychology and education at the present time has no right, therefore, to attempt to settle anything as a finality. For the psychological science of today is simply no finality whatever. The true practical interest of such a discussion lies in attempting to consider how, at the present time, and under the present temporary and rapidly changing conditions, the teacher and the psychologist can best be brought into co-operation.

I

A closer approach to this question may first be made thru an attempt at a plain statement as to the general situation in psychology at the present day. Every discussion of the new psychology, and of its place in education, seems to presuppose the thesis that there is a new psychology. This thesis is undoubtedly, in some sense, correct. None the less is the whole matter subject to a good deal of misunderstanding, and we may, therefore, ask at once: In precisely what sense is there a new psychology at all? In what sense was there an old psychology, which is now abandoned or superseded? To these questions I find at present answers, current and frequently repeated, which I think to be, nevertheless, wrong answers. I refer, particularly, to two statements, both of which are not unknown in the recent literature of the subject. I will consider these two statements in order.

The first of these statements runs: There was once something in existence and in favor which is henceforth to be known as the old or rational psychology. This psychology, so the statement in question runs, was concerned with the nature, the origin, the destiny of the human soul, of the ego, of man as he is in himself. But, so the same statement continues, modern thought has somehow changed all this. We now no longer study that old or rational psychology. We have given up trying to find out the true nature of man, or of the soul, or the true destiny and meaning of our life. We now study nerve cells and reflexes, the knee jerk, and the scatter-wittedness of children's minds. We take reaction times, and make tables of the statistics of fears, bad dreams, and color hearing. And this is the new psychology. This, in sum, is the first of the two statements to which I have just referred. I summarize this statement in a somewhat crude form. But what I mean is that the statement in question, in any form, sets forth an essentially false antithesis. As a fact, no such change in the objects and interests of human thought has taken place as this false antithesis implies.

It is true that once questions about the origin and destiny of the human ego — in other words, questions about man's place in the universe — were current and favorite questions, current and favorite, namely, amongst believers in any form of the religious faith, amongst theologians of every school, amongst philosophers of every seriously reflective and thorogoing group of philosophical investigators. That is true. It is also true that precisely such questions are current today amongst precisely the same types of persons. If you have any form of religious faith, you believe something about man's nature and destiny and place in the universe. If you study a technical theology, you are interested in the statement and defense of some such faith. If you have time and right to study philosophy, the principal part of your work as a student of metaphysical issues will properly be devoted to precisely these questions. These questions, then, are in no sense antiquated. They are not superseded. They are as modern, as human, as intensely fascinating, as rational as ever they were. The human mind has precisely the same right to face ultimate issues that ever it had. And in facing these ultimate issues, if it of course seeks new light, it also respects, uses, and depends upon types of insight that are very ancient. No new psychology, no other form of current doctrine, has in the least changed this essential situation. So long as man is interested in his own destiny, he will either believe or philosophize about ultimate questions. And when he has time and spirit for the undertaking, he will have a right to philosophize, and neither neurology nor child-study will ever interfere with rational attempts at a philosophy of mind. If such a philosophy of mind be what is meant by the old psychology, I reply that such "old psychology" is precisely as new and as interesting today to philosophers as ever it was.

But, meanwhile, I myself should maintain that no such philosophical study of ultimate questions has, of itself, any very direct bearing upon the technical problems of educational methods, or upon the similarly practical problem of any other art. Philosophy notoriously bakes no bread. It is true, therefore, that the sort of psychology which can be of direct interest to the teacher will, in general, be empirical psychology. Empirical psychology is an effort to understand, in as scientific a way as possible, the natural history, the facts and laws of the behavior, of man's mind, as they exist for our daily experience. And the study of the natural history of the human mind is itself in no wise dependent upon any particular philosophical or theological theory. The philosophical study of man's nature and destiny is itself very distinct from the study of empirical psychology proper. But now this distinction is itself in no wise a novel distinction. Nor is the recognition of this distinction in any sense peculiarly modern. Aristotle already clearly distinguished the study of the natural history of man in his physical, in his mental, and in his social aspects, from the inquiry into metaphysical or ultimate philosophical and theological problems. Empirical psychology, viewed as such, never has undertaken to solve ultimate philosophical issues. Like any special science, it is a doctrine of whose inductions, when they are made, a wise philosophy will take a fair account. So far, then, there is a true antithesis between the philosophy of mind and the empirical study of the contents and behavior of man's mind. But this antithesis is simply not one between the old and the new. It is, *mutatis mutandis*, very much the kind of distinction of office which exists between mathematics and the special physical sciences. A man who talked of mathematics in general as something to be called "old," and who opposed what he called the old mathematics to what he called the new theory of electricity, and who said that one of these pursuits was destined to supersede the other, would be as ignorant of the business of science as are those who narrowly and absurdly oppose something said to be superseded, which they call the old or rational psychology (and which was and is nothing but the philosophical study of man's life), to something which they call the new psychology, which is merely our best present effort to make out what we can about the natural history of the human mind. So much, then, for the first of our two statements of the antithesis between old and new in psychology.

II

The second false statement which I wish to set aside defines the antithesis between the old and the new as follows: Once, says this statement, there existed a study of human nature which was exclusively introspective. The psychologist studied merely his own individual mind. That was the psychology of the armchair. That was the old psychology. It was pursued, says this statement, until very recently, say until Fechner, or until Herbert Spencer. The new psychology is not thus exclusively introspective. It is experimental, or social, or physiological, or comparative. It forsakes the armchair and makes use of the laboratory, of the dissecting room, and of a wide observation of many beings with minds. Now, of course, the old psychology, being, according to this view, introspective, interested merely the individual psychologist, who edified himself and not the brethren. As the teacher has not amongst his own pupils that particular old psychologist whose book used to be a classic, the teacher can be but little helped by that respectable person's study of his own states of mind. Therefore the teacher must be exclusively interested in the new psychology, since that psychology is not concerned with any one man's states of mind, but with facts capable of a more universal verification.

Once more I have stated somewhat crudely the view that I oppose.

But what I mean is that in any form this statement is hopelessly unhistorical. It gives us a false antithesis. There has never been any notable study of human nature in its empirical aspects that was satisfied to be mainly introspective. Aristotle's psychology, as it appears in his treatise on that subject, the first of all European treatises belonging to the field, is fundamentally a psycho-physical doctrine. Aristotle very carefully states the psycho-physical program, and pursues it according to his light. He uses introspection very much as a modern experimental psychologist would do. His sources of psychological knowledge are on occasion medical. They are very frequently, in the more general sense, biological. They include an effort toward a study of comparative psychology. They make especially prominent observations upon mankind in general. In the ethical and political treatises of Aristotle such observation was pursued far into the social realm. Nor is the later psychology of the ancients, nor is mediæval psychology, at all exclusively introspective. To take a notable instance, the famous doctrine of the faculties of the mind was obviously derived from nobody's study of his own mind, but rather from the common social traditions about human nature embodied in the current psychological vocabulary of language. These common social traditions are the precipitate, so to speak, of generations of comments passed upon men by other men. In brief, one may simply defy students of psychology to point out where in the whole class history of man's efforts to understand the human mind an exclusively, or even mainly, introspective empirical psychology has ever existed, or even been attempted. The common gossip of social intercourse, the more precise observation of the forms of social and of political life, the obviously psycho physical doctrine of the temperaments — a doctrine absolutely inaccessible to pure introspection — these are typical cases illustrating the methods by which the psychological study of the natural history of mind has always been pursued. To quote one more special case, consider Locke's doctrines about the intellect. The first book of Locke's *Essay on the Human Understanding* is devoted to the famous onslaught on the doctrine of innate ideas. As Locke pursues this argument, what are his sources of psychological information? I reply, apart from their necessary crudity when criticised from our present point of view, Locke's sources have to be defined as anthropology and child-study. Locke uses as empirical arguments travelers' reports about savages, and anybody's observations of childhood. Is this an exclusively introspective psychology? Is this an especially antiquated method of work? To be sure, in the Scottish philosophers you very frequently find, side by side with psychology, a great many investigations which depend upon what some people call introspection, and upon what nobody should call empirical psychology. But this other something in the works of such thinkers is philosophical reflection. In such works empirical psychology and metaphysics are frequently very confusingly blended. But, in any case, philosophical reflection is something very different from the introspective observation of the contents of one's own mind for purposes of natural history. Introspection, in the psychological sense of that word, the relatively exclusive study of the contents of one's own mind for the sake of finding out the laws of this mind, is a process that you find deliberately pursued in a very few of the older works belonging to the literature of our subject. But these works are not text-books of psychology or independent investigations into the science as such. They are psychological autobiographies of greater or less value as documents. But in precisely this same sense introspection is present as a notable factor in the literature of today. In fact, there is much more autobiographical confession in modern literature than ever there was before. The introspection of St. Augustine has its representatives in the older literature, say by tens. The introspection of Marie Bashkirtseff has, in the newer time, slain its thousands. And so much for the old and the new, as regards this aspect of introspection. But if you ask whether the truly scientific psychologist of the present time has wholly abandoned introspection, then every respectable text-book of recent psychology would show you how little this is the case. In general, modern experimental psychology constantly involves the scientific pursuit of introspection under artificial conditions, accompanied, indeed, by a wide comparison of the reports of various observers.

In brief, then, the second statement often current as to our antithesis is false. The old psychology was not exclusively, or even mainly, introspective. It was always, according to its light, psycho-physical, social, and comparative. It studied mind and body together, and observed indirectly as many minds as could be got under some sort of scrutiny. On the other hand, the new psychology does not neglect a proper introspection, but gives to a due comparison of introspectively obtained results an even more prominent place than the introspective ever obtained in the older psychologies.

I have thus dealt with two false statements of the antithesis between the old and the new psychological methods. Having set aside the false antithesis, it is easier to state in more practically valuable terms the nature of the true answer to our question, What is the new psychology? Recent psychological study is separated by no chasm from the psychology of the past. It is a pursuit with vastly improved instruments, and with vastly increased numbers of observers, and with greatly intensified technical training—a pursuit of the old study of the natural history of mind upon methods and with ideals everyone of which the past, according to its light, already in a very genuine sense anticipated. It is the fruit, therefore, of the past, just as it is a stage on the way to a higher future insight into how man's mind behaves, and into what he can best do to manage and to cultivate minds. Very imperfect is our knowledge about all these matters at present. Perfectly worthless would be our knowledge, however, if we had not the whole tradition of our older acquaintance with human nature to draw upon. And every sensible psychologist constantly uses that older tradition, constantly attempts to add to it, and is a new psychologist merely in so far as he is at present able to use certain special instruments of research which were until recently inaccessible. In the novel use of these special instruments lies what makes our psychology a new psychology.

So much for the situation of the moment. The new psychology is no mystery, no miracle, no wonder of recent invention. The newer researches have, indeed, been as fascinating in their details as they have thus far been incomplete as regards their theoretical results. Our empirical knowledge of human nature is still in its infancy. It has always been in its infancy. And so far the old and the new may, indeed, lie down together. Our knowledge of human nature is unquestionably growing. But our scientific theories as to the natural history of the human mind have not recently been in any thorogoing sense revolutionized. We know a great deal more than Aristotle knew about the psycho-physical problems that he already began to study, but our theoretical insight into the fundamental laws of mind is still small. Nevertheless, if one considers the worth of special researches, there is, indeed, a complex, and, in view of the great mass of details which the new instruments of research have recently added, there is a relatively new empirical psychology. The power of this psychology to give final guidance to the teacher or to any other practical manager of the mind is very imperfectly developed. Nevertheless, just because practical workers have constantly to do with details, rather than with theories, this vast collection of manifold details concerning the behavior of mind is full of suggestions that, from time to time, can prove of very considerable practical importance to the teacher.

III

This being the general situation, the practical problem once more reduces to this: There is a great deal in the newer study of mind which can be, and which ought to be, of practical service to the teacher. But the new science is pursued for its own sake, just as the teacher's art is carried on with reference to the teacher's own interest. The problem is to bring about a wholesome co-operation between pursuits related, but just now too much kept apart. What the teacher constantly desires is to get at the new psychology, to learn what it means, and what it has found out. If its results were already statable in definite theoretical form, the application of the theory might become immediately possible. If the new psychology were in some perfectly clear and glaring contrast to the old, some equally striking revolution of practical methods might be expected to follow from it, and to be capable of definition. But since neither of these things is so, since neither theoretical development nor novelty is as marked a feature of the new psychology as some hopeful accounts would imply, the teacher in general no sooner approaches the new science than he is baffled by its wealth and by its puzzle, while the new psychologist no sooner endeavors to guide the teacher than he is obliged to show by his mysterious manner and wonderfully constructed sentences that what he most desires to impart is still in the main simply unspeakable. As a fact, I myself feel that at present the relation between the students of the newer psychology and the teachers of our country is not yet a very healthy relation. I myself have been for two or three years temporarily the chairman of a philosophical department in my university. As such I have had to consider the hopes and difficulties of a number of young men entering upon their profession as psychologists. I have felt very much concerned about the harassing and painful situation in which some of them are at present put. I have feared sometimes lest the public misunderstandings as to what their profession may do or ought to do for teachers might result in the end in injury to the success of these ardent investigators. I believe profoundly in the study of that psychology which, in the sense just pointed out, is indeed new, since, without breaking with the past, it is constantly renewing its use. But one of the missions of the public, whenever it feels a strong need for a good thing, seems to be to do all sorts of deeds to hinder the fulfillment of its own ends, and to confuse those who are trying to help it. I feel, then, disposed to suggest what at the moment is too often the situation in which the young psychologist innocently and painfully finds himself.

The psychological investigators, and especially the younger psychological investigators in our laboratories, are, for one thing, just now in the position common to men who are forced to win a hearing by somewhat magnifying their own office. If empirical psychology is not new, the laboratories are new, and they are unquestionably very valuable and admirable means for the advance of the science. Attention, however, has to be attracted to these laboratories. The attention and support of such practical people as the teachers are very valuable for the young psychologist. He, in his turn, is sanguine. He is devoted to his calling. He hopes that whatever interests him can be made to interest everybody; and so he is disposed, if not to make very large promises to teachers, at least to make very considerable calls upon their time and patience. In consequence, the teachers who are under his influence are frequently led to hope that whatever happens in his laboratory may, in some wise, pretty directly contribute to the establishment of sound methods in education, to the saving of souls, or to the answering of all those countless practical questions that seem so frequently, in the average teacher's mind, to demand an immediate solution. Hence, the teachers look more or less wonderingly toward the laboratory. And the man in the laboratory is more or less stimulated, and, I fear, sometimes more or less distracted, by these calls from another profession. Thus stimulated and thus hopeful, he of course longs to help everybody. Distracted by the external calls for aid upon matters which perhaps do not directly concern him at all, he tends to undertake the solution, not indeed of everything, but of most of the things that the teachers desire him to solve. Meanwhile the young psychologist feels that the teachers have countless facts which they might furnish to aid him in his researches. These facts are occurring in the schoolroom or elsewhere, but, so far, not in the laboratory. Perhaps the psychologist thinks that these facts can be got indirectly into the laboratory by means of the now well-known syllabus. The syllabus asks questions and furnishes a blank which the teachers, according to their lights, are to fill out in such wise as to indicate the contents of the minds of their children. But the psychologist in the laboratory cannot well control the scientific use of the syllabus by persons outside of the laboratory. Lacking himself the time for an adequate personal study of children in schoolrooms, the laboratory psychologist is, consequently, too often left dependent on the observation of unskilled persons for far too many of his data. Meanwhile the syllabus, often inexpertly used and filled out, thru the busy teacher's aid, may have led to much waste of time in the schoolroom. It may also tend to produce in the end a feeling of disappointment in the teacher's own mind. Countless so-called facts go on record, but the results are still to wait for. The syllabus comes, but wisdom lingers. The teacher, too, lingers on the shore of psychology ; and, somehow or other, the entire situation begins to get a painfulness of which we have recently heard many echoes.

Or perhaps the young psychologist does not use the syllabus. He rather plans to bring his instruments to the schoolroom, or, on occasion, the school children to his laboratory. Both undertakings are frequently thoroly justified. But, in any case, experiments pursued under such conditions are subject to a double criticism. The laboratory psychologist properly desires these experiments for theoretical purposes. The teacher desires them to be at once and directly of practical significance. It is true that the combination of these two interests has been in some cases notably very easy. But in other cases it may be of great difficulty. And the psychologist in his laboratory may find it hard to acquire sufficient experience of the schoolroom and its problems to adjust these conflicts when they arise. He is led to making vast promises. The teachers remain promise-crammed. That is, so far ; too often, for the time being, all. As a fact, the young psychologist ought not to be distracted by this demand for immediate practical application. On the other hand, the teachers ought not to be asked to give extra time to contribute to the advance of purely scientific interests. They need to get direct practical benefits. And yet at present these two bodies, whose interests, if related, are so diverse, ought to be made to co-operate; while the co-operation is still left to the ingenuity and social adroitness of a busy young laboratory man, who has recently obtained his doctor's degree, who has the whole problem of his career before him, who has to teach college classes, to interest the general public in his science, to contribute papers to the psychological journals and, perhaps, to keep up polemic relations with his metaphysical colleagues, at the very moment when the teachers desire him to give them infallible advice, and when he himself is longing to find out something about what goes on in the schoolroom as well as in any other place where human nature displays itself. Now, I say that this situation involves altogether too great a demand upon the young psychologist. If he frequently fails wholly to satisfy the demand, if his polemical essays have a somewhat hectic tone, if his promises to the public have a somewhat crude vagueness, the fault is very frequently not his, but the result of the unfortunate situation in which his profession and the public still place him. Now, if we do not better this situation, we shall all suffer. And the remedy lies, not in trying to ignore the new psychology, nor merely in telling the teachers that they have nothing to hope from its work. The remedy lies precisely where experience has so often shown that, in similar cases, the difficulties of too complicated a situation are to to be met. The remedy lies in a new division of labor.

One who attempts to define a relatively new practical office is subject, at the present day, to the easy criticism that we already have too many officials. It seems, indeed, unnecessary to create an office for a man until you already have a man for the office. But, in case of the recommendation that I now propose to make, it seems to me that we already have both the men and the practical need for the office. The situation of the students of the new psychology is one which needs to obtain relief. The situation of the teachers who desire to get at the new psychology is one which needs to receive assistance. From both sides comes the call for the official whose office I shall try, as I close, to define. Already, in a number of cases, young laboratory psychologists of sufficient skill and energy have actually made the tasks which I have in mind their principal business. Already, in case of certain special public institutions, as in schools for defective children, an office substantially identical with the one that I have in mind has been recognized. What I wish is to suggest that the recognition and definition of the proposed office should be made systematic, and that its importance as a means of contributing toward bringing about a true relation between modern psychology and modern education should be recognized.

I think, then, that the time is ripe for the recognition of a new kind of intermediate scholar and official, whose business it shall be to mediate between the teaching profession and the work of the laboratory psychologist. My practical proposal is that in our large cities, and later in other places, there shall appear in the office of the superintendent of instruction a person whom I shall venture to call a consulting psychologist. He should be a well-equipped, modern, experimental psychologist, with a thoro university training, with skill as a laboratory investigator, but, after he once accepts his office, with the resonsibilities and duties of a decidedly practical man. He should be well versed in what our better institutions have to offer in the way of the general study of the art of education. He shall also, if possible, have had himself some experience as a practical teacher. But he shall not, on the other hand, be a professor of pedagogy. He shall not be responsible for teaching psychology to college classes, or to anybody else, excepting so far as the spirit moves him to discuss his science with the teachers of his city. He shall, indeed, consult, but he shall not be regarded as anybody's final and authoritative official adviser, infallible or otherwise. If possible, he shall never be called "professor." He shall have no authority over the organization of schools or the determination of school methods. But this shall be his office and his responsibility, namely: to find out, so far as that may be possible, and with a minimum of interference with the ordinary work of any school, whatever it is possible and worth while for the teacher and the trained psychologist together to know concerning the mental states and processes present in the children of the schools of his city. In other words, his official task shall be simply investigation and report upon those facts concerning the school children of his city which are at once of a psychological character and of practical interest.

Time would, of course, fail me in this connection to attempt to set forth, with any sort of fullness, what classes of facts answering to this definition may be regarded as already accessible, in the schoolroom, in case the trained psychologist is from time to time present to direct their collection. The recent literature in praise of the virtues and the hopes of the new psychology has already had a great deal to say about these classes of facts. For instance, at the moment, a great deal of discussion is going on concerning the phenomena of fatigue in the schoolroom, and concerning the influence of fatigue upon the intellectual work of children. The difficulty with all these later investigations of fatigue is that they are at present in a stage which forbids the inexpert person to form any independent judgment about the worth of the methods of investigating fatigue or about the practical results of such investigation. The whole subject is in a transition state. Yet there can be little doubt that work by experts, when practically controlled by the presence and the plans of practical teachers, would rapidly tend to reach results that would be more or less tentatively applicable for educationl purposes. The development of the study of fatigue in its practical relation will never be rapid and wholesome, unless theoretical students and practical workers co-operate; nor can one hope for sufficient attention to be given to these investigations on the part of the possible medical inspectors of our schools. The phenomena in question are largely, and, in some cases, very subtly, psychological. A thoro investigation of them can be hoped for only from those who are primarily interested in mental life as such. One need entertain no exaggerated hopes concerning the revolutionary effect of such study, if one believes, as a matter of plain sense, that much will be gained if the psychologist and the teacher have the opportunity to consult together concerning the accessible facts, and concerning the methods of work, as they from time to time develop. Yet nobody but a psychologist whose time is principally devoted to consultation with teachers can have at his disposal time sufficient for such useful investigation.

If the phenomena of fatigue form thus one of the general fields of possible investigation, there are other fields that even more obviously and directly both interest the teacher and puzzle the psychologist. Good and bad spelling; the countless sorts of good and bad memory; the mental effects of physical exercise; the psychological relation of manual training to other parts of the school work; the increase of skill with the use of this or of that method of training in arithmetic, or in some other branch of school work; the phenomena of school excitements, rumors, occasional mutinies, and the like; the psychological relations of various methods of school discipline; the presence and the variety of the psychologically interesting temperamental differences amongst the school children; all these are instances of classes of facts already accessible in useful ways to expert psychological observation. None of these classes of phenomena are exclusively related to the study of exceptional or of morbid children. The matters thus far on our list may also be studied more or less statistically and in relation to large numbers of children at once. The interest of all these classes of phenomena, both for the psychologist and for the teacher, is easily recognized. Yet there is nobody at present whose official business it is to study them at once with professional expertness and with a strongly practical interest. Neither by the use of the syllabus, nor thru occasional invasions of the schoolroom by the overworked college teacher of psychology, nor by the equally sporadic visits of medical inspectors, will such facts come to get the sort of examination that they need. To interest teachers in such classes of facts is, indeed, useful in its own place and time. But the teachers are not sufficiently expert in psychology to make successful study of that fact for themselves. In consequence, at present we are left to crude observation or to loose generalization by the practical teachers, on the one hand, and to laboratory investigations or to statistical collections of far too theoretical an interest, on the other. The consulting psychologist, working from time to time in the schoolroom, and engaged along with the teacher in investigating such facts, is the person needed at present to bridge over the gulf which separates the two professions, whose co-operation is now so desirable, but often apparently so hopeless, an ideal.

The term "consulting psychologist" suggests, however, at once, to many minds the thought of a person specially interested in the more pathological problem of the schoolroom. And, of course, I should be disposed to expect that our consulting psychologist would, indeed, be much interested in precisely these problems also. I should merely be unwilling to confine his work, or the prospects of his success, to the field of the study of exceptional phenomena. The psychology of the healthy is in itself more practically important than the psychology of the morbid; and I do not wish my consulting psychologist to be conceived merely as a student of the defective and disordered school children. Nevertheless, it is true that the study of defect and disorder of any grade could be carried on in a useful way by our consulting psychologist in connection with the rest of his task. And here he could co-operate with and supplement the work of the medical inspector. Defects of sense organ might easily attract his attention, when they had escaped the attention of others. Extraordinary forms of naughtiness or of stupidity might yield their secret to him, when the medical man had not had time or interest to advise the teacher concerning the nature of the defect. The various sorts of liars who appear at different ages in many schools would frequently be proper persons for the study of the consulting psychologist. Obstinacy, eccentricity, precocity, all these characteristics, where they occur, would interest him, and would be a topic for useful consultation between him and the teacher. As our theoretical knowledge of the meaning of such phenomena increases, the consulting psychologist would be responsible for knowing the progress of his science, and for applying it to the schools with which he had to do.

But most important it is, for my present purpose, to insist upon the fact that, at all events in the present state of the science, my consulting psychologist, as I conceive him, would be a searcher for facts much more than a director of other people's methods. He would not be an authoritative adviser in any such sense as that in which the medical inspector may be an adviser. The decision as to what has to be done in a given case involves as much the practical experience of the teacher as the scientific wisdom of the psychologist. The consultation would always include both the consulting parties in a very effective way. The investigations conducted by the consulting psychologist would always be subject to the direct criticism of his superintendent, of his school board, and of the teachers whom he both serves and, within the range of his own skill, enlightens. The false impression now existing that, if psychology means anything, the psychologist can infallibly direct the teacher, would tend to pass away at the very moment when an intimate relation between the two made each serviceable to the other. My consulting psychologist cannot say: "Great is science, and we, the prophets of science, are verifying this or that theory, and you, the teachers, must wait until we have, some day, shown you the value of it all." The consulting psychologist will cultivate modesty along with his efficiency, and will avoid mystery the more he becomes useful. His daily speech will be plain; and in his "pedagogical seminaries," if ever they come to exist, the sentences used will be as straightforward as those now customary amongst practical workers. He will be directly responsible for pointing out to the practical people with whom he is associated verifiable facts present in their schoolrooms, and facts capable of being advantageously used by them and in their art. Such a consulting psychologist, relieved from the heavy duty of expounding his science as college teacher, of contributing to its theoretical advances, of converting the public, and of dealing with the theologian, all at once—relieved, I say, of all these heavy burdens, would be able, by reason of the very limitations of his task, to contribute in the end what might often prove the most universal as well as the most practical interests both of teachers and psychologists.

In fine, my consulting psychologist would occupy a place that would grow progressively more important, when once progressive young men were given a start in the calling. Collector and reporter of facts about the minds of school children, he would tend to be a discreet and cautious investigator, because he would work constantly under fire. Expert in his work, and limited as to the field of its application, he would be able to prevent the waste of time now frequently involved in the pursuit of child-study by psychologically inexpert teachers. He would be near enough to control the sort of child-study that it is worth while to pursue in given schools. He could be constantly consulted as to how to make this or that child-study investigation exact. He would venture upon distributing no syllabus, unless he could pretty clearly show to his own superintendent and teachers why their practical needs were furthered by just such an inquiry. On the other hand, he could distinctly represent to the teacher the interests and the dignity of the truly scientific study of psychology.

As to his practical influence, that he would obtain in proportion to his strength. But he would lack that infallibility which sometimes seems to hedge the college professor—yes, to hedge him in, until somebody detects that it is only a false infallibility, and until people then, with false reaction, forsake altogether the studies that have disappointed them. As for the actual daily usefulness of the consulting psychologist as a person present in the superintendent's office, I have been told by a prominent city superintendent of this country that in his own office a great part of the actual work is, as he expressed it, psychological, since so many of the problems that come to his office are psychological. Once get such a good consulting psychologist into the schools of the city, and the superintendent would prize him, the school children would love his visits, and the teachers, I may say, would constantly, and, I may venture to add, even ardently, surround him. Meanwhile he would be in no sense priest or prophet. He would be investigator, investigator of what was practically worth knowing about the minds of children in that city. In his turn he would constantly be able to pass over contributions to the professional college psychologist in the laboratory. The latter, for his part, would be relieved of the arduous duty of constantly providing milk for all the psychological babes of his community, whatever their calling, while from the work of the consulting psychologist the theoretical psychologist would, in the end, derive numerous and fruitful scientific contributions. The new calling would thus contribute both to the organization of psychological research and to the practical application of such research to the work of the teacher.

While no immediate revolution of methods would follow from the services of the new official, the practical and daily value of properly adapting psychological research to practical needs would be shown to teachers thru the person and work of the consulting psychologist. And then we should no longer hear this unhappy question concerning the old, or rational, and the new psychology, since all, from the least unto the greatest in the teaching profession, would know that the only psychology worthy of the distinctive name of empirical psychology is neither old nor new exclusively, and is always both old and new, and is best called sensible psychology. It is destined to be as useful to the teacher as his practical skill and tact can learn to make its results, when the expert exhibits these results.

If one asks whether good, young consulting psychologists could even now be obtained, I answer, unhesitatingly, yes. There are in this country more than half a dozen universities already well equipped to train such men. If one asks whether the useful consulting psychologist would be a very expensive luxury, I answer that he could be obtained easily, according to his age and experience, at from $1,500 a year upward. If one asks whether such a man would have to be a great genius in order to be serviceable, I answer at once, no. In the present condition of psychology, any really well-trained young man of sense, a graduate of a first-class university course in his subject, when once at work in the city schools, could show the teachers, in six months, more about the practical relations of empirical psychology and teaching than these teachers will ever get out of years of those dreary general courses of public lectures on pedagogical psychology which our teachers nowadays so pathetically crowd, and so self-sacrificingly support. I speak advisedly and as a lecturer, when I say this. Many shall run to and fro, and knowledge shall be increased, and of the making of many lectures there will doubtless be no end. But in this field, as in any other, it is, after all, as everybody knows, work that counts, and not talk. And the work that teachers want done by psychology for them is discreet, practical work, done from time to time in the schoolroom, by a trained psychologist, who knows what he is doing in his science, and who wants to help the teachers see in their schoolroom facts worth seeing.

And that is what, as a poor metaphysician, whose practical wits are, of course, dull, I may venture at the moment to say about a way to bring our rich and progressive educational life into a closer study and truer relation to what in a proper sense is to be called the new study of psychology.

RATIONAL PSYCHOLOGY FOR TEACHERS

BY W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION

The president of this Council has courteously asked me to present a short paper on the value of rational psychology for teachers. I have gladly consented, because I place a high estimate on its worth. I shall try, therefore, to describe as concisely as possible what is understood by the expression rational psychology, and discriminate it from other psychology, and, after that, to tell something about what it claims to do, and point out its use in education.

First, what is meant by rational psychology? To this question the reply is that, while psychology in general includes all observations on the operations of the soul or mind, these operations fall into two classes, namely, transitory activities on the one hand, and the permanent forms, or laws, that govern those activities. The former order, the transient actions, flow on in a perpetual stream, each one replacing another. But the stream abides, and so, too, do its essential forms. We turn our attention from the flitting events, or actions, and look upon the form of activity, and then we come to see general conditions, or laws, that govern the particular events in consciousness. The famous philosopher Wolf, who systematized the ideas of Leibnitz and reduced them to pedagogic form for the universities of Germany, named the former observation, that of the transient actions, empirical psychology, while he named the latter species of observation rational psychology, sometimes calling it metaphysical or transcendental psychology. While empirical psychology contained the classification of the particular mental facts under certain general heads, such as cognition, feeling, will, and other anthropological and ethnological characteristics, on the other hand, rational psychology would treat of the fundamental distinctions in the soul, such as its personality, its freedom, and its immortal destiny.

Leibnitz had shown, in his *New Essays on the Human Understanding*, how to find these traits of the soul, and he had called the mental act by which they are known *apercevoir* instead of *percevoir*—apperception instead of perception. We perceive mental things and events, but we apperceive the nature of the mind itself. Leibnitz would, therefore, have defined rational psychology as covering apperception, while the field of perception belongs to empirical psychology.

The philosopher Kant, in his transcendental deduction of the categories, has spoken of the synthetical unity of apperception, and declared it to be the highest principle of the understanding. He evidently had in mind the thought of Leibnitz.

Again, Herbart has borrowed this doctrine of apperception from Leibnitz, thru Kant, and extended its application to all recognition, interpretation, and explanation, making it the fundamental activity of the mind to seize ideas and adjust them to the stock of ideas already on hand. Rational psychology deals especially with this apperceiving power, by which it explains the transient facts and events by referring them to the energies of the soul that produce them.

Let us illustrate this further: Space, time, and causality are apperceived, but not perceived. They belong to rational psychology, and not to empirical psychology. But they furnish the logical conditions that make plain the relations of events observed by empirical psychology. We observe a succession of events; we are able to do it only by the idea of time. We observe a thing and its environment, but we are able to do this only by the idea of space. We observe a change in an object; the idea of substance makes this possible, for the thing before and after its change has preserved some identity, and this identity is substance. We think the change as an effect only by thinking of a cause as something active that produced the change. The change belongs to the order of effect, and is dependent, but the cause must be thought as active and originating. The nucleus of the idea of cause is, therefore, self-activity.

Again, space and time involve infinitude. They are self-continuous. Every limitation thought in them implies space or time to exist in, and, therefore, continues space or time, instead of limiting it.

Looking anew at this process, we find that perception furnishes thing and environment, but apperception furnishes space as the logical condition, and infinitude as its form.

While perception furnishes the event, apperception, in the sense Leibnitz used it, furnishes infinite time as the logical condition of any and all events. Perception furnishes a change or movement, apperception furnishes the idea of causal energy and makes it to be an originator of new modifications in the world. This is the idea of self-activity.

Rational psychology, following out this thought, arrives at the ideas of freedom and responsibility, and can explain the facts of social experience—the return of the deed upon the doer, and the growth of conscience. For conscience has this significance that the individual man recognizes himself as a transcendental ego, originating modifications in his environment, causing new chains of causal relation to take the place of old ones. More than this, his conscience involves the recognition of other free wills than his own. He thinks these other free wills and unites them to his own course of action, and thereby makes their will his own, and thus ascends to a social will. This is a great conquest for rational psychology, perhaps the greatest of all its conquests. For in seeing the moral will it gets a glimpse of the conditions of absolute being. It is, in fact, able to say with confidence that the absolute being itself is ethical. Because it would forever destroy the results of its creative activity, unless it were altruistic and possessed what the psalmist calls loving kindness. But rational psychology has shown clearly that, if it were not altruistic, an absolute mind could not exist. It could not be conscious of itself, it would destroy all self-objectivity, and hence would not be self-determined. It follows that it could not even exist.

The great thinker Hegel reached this insight in 1806, when he wrote his *Phenomenology of Mind*. The last two chapters show that the consciousness of the free will is an act of absolute knowing. In the Christian consciousness—yes, even in the Hebrew consciousness of the Old Testament, as reached in the Psalms—man has come to know the nature of absolute, self-determined, independent being. Hegel called this book his voyage of discovery. This has been a puzzle to his disciples. It is only on applying the key of his logic that one comes to see what Hegel saw on his voyage, namely this: that there is no independent being not self-determined; no independent being not an intellect and will; no intellect and will that does not find its perfect ideal in goodness or altruism. After his *Phenomenology* he could write his logic, and show that every category, except the ethical idea, is inadequate for independent being.

Rational psychology, it is evident, is founded on the insight of Plato into the self-moved one. Individual immortality follows as a logical consequence of this insight. For without it the divine self-knowing would not be a knowing of its own substantiality and independence. It is not strange, therefore, that Plato wrote the *Phædon* and the tenth book of *The Laws*. Nor is it strange that with this insight Aristotle could write the *Nichomachean Ethics* and the seventh chapter of the twelfth book of the *Metaphysics*. Those writings of Plato and Aristotle, together with the *Nouveaux Essais* of Leibnitz, the *Contra Gentiles* of St. Thomas, Kant's *Critique of Practical Reason*, and Hegel's *Phenomenology*, are the finest parts of the literature of rational psychology.

The ethical ideal is the summit of rational psychology, but art and literature, too, borrow their ideals from it. For it furnishes the standard by which works of arts, whether in poetry, music, painting, sculpture, or in architecture, are measured. Do they express perfect freedom, and the negation of selfish exclusion, they but reveal the highest ideal found by rational psychology. If they portray the crushing out of human individuality by the world-power, they pronounce judgment against themselves.

Formal logic is counted apart from psychology, and yet it is one of the most important chapters. in rational psychology. The discovery of the three figures of the syllogism and the valid modes for deductive reasoning by Aristotle revealed the structure of the mind as a process of knowing by inference.

But rational psychology, besides this structure of the syllogism, has done a better thing in showing the three stages of knowing. This was one of Plato's best contributions. In the tenth book of his *Laws* is found one of the many discussions which lead up to the third stage of knowing. "All kinds of motion," says he, "may be reduced to two, motion thru another and self-motion," and it is clear to him that self-motion is the basis and foundation of motion thru another.

The lowest stage of knowing sees things without their essential relations, or at least it has only a slight glimpse of these relations. As it grows stronger, it passes into the second stage of knowing, when it comes to see that every thing or event is relative, depending on an environment of things and events. Then it pronounces all knowledge to be knowledge of phenomenal being; mere show or appearance, and not true reality. But with the operation called apperception by Leibnitz it sees the conditions of true being, and knows pure self-activity as the fundamental existence. It sees that all things that exist, whether transient or permanent, are to be explained by and thru it, and that this forms the third stage of knowing, the knowing which Plato called knowing by totals, and Aristotle called *theoria.*

These three stages of knowing are variously named. The first may be called that of sense-perception — it knows sense objects and supposes them to be independent. The second stage may be called that of the understanding — it acknowledges the relativity of all things. They are mutually interdependent. Like the waves of the ocean, their individuality is only a seeming one. They are really swallowed up in the sea of being. But the third stage of knowing, the fundamental principle of Plato and his philosophic followers, uses the insight into self-activity. It knows with perfect certainty that any whole or total of being is a personal mind.

It is an interesting theme in rational psychology to note the relation of the mind to the world of experience in the three stages of knowing.

In the first the mind is dependent on the objects perceived for its content. In the second, with the doctrine of relativity it has freed itself from experience by arriving at a negative first principle. The ocean of pure being swallows up all the data of experience ; they are merely phenomenal. Freed from the data of experience the third stage of knowing discovers the true conditions of all existence to be found in mind as perfect, self-active being. Life is self-active being of a lower order than conscious knowing. The plant is lower than the animal.

The third stage of knowing alone can correctly interpret the world of sense-perception, for it explains all its formations and transformations as steps in the realization of mind. A perfectly altruistic mind has made a schoolhouse, time, and space. In this schoolhouse it has set up a school of training in individuality. The mineral, the plant, the animal are all at school training for individuality and independence. As the intellect and will become perfect, goodness and righteousness become more and more the goal of the conscious intellect. With the perfect intellect there would be realized a theodicy. God's ways would be justified.

Rational psychology is not a substitute for empirical psychology; still less is empirical psychology a substitute for rational psychology. The knowledge of ideals, the unital purpose of all education, is given to the teacher by rational psychology. It shows him the ladder of ideas and stages of thought up which he is to climb with his pupils. He will not rest contented in the first stage of knowing, nor in the second. He will teach all things in the spirit of the third stage.

But the concrete bodily conditions, the pathology of education, must be learned from empirical psychology. The rate of progress in studies, the amount of drill which will not arrest development, but hasten it, the idiosyncrasies that may accelerate or retard growth, the diseases of the sense organs, the code of health—these and their like must be learned from empirical psychology, borrowing its standards, however, from rational psychology. For without these standards of progress a lower order of activity is just as good as a higher order.

The real, just as it is, is not the true norm. Empirical investigation can tell us what is, but not what ought to be.

Rational psychology can give to the teacher that higher apperception of which Leibnitz has told us. Empirical psychology cannot give us the apperception, but it can give us the facts and instances which need apperception. It can bake bread, but it cannot give us a knowledge of God, freedom, and immortality.

We need not ask the question which is the more profitable, as Novalis did, for we must have our daily bread, and use it for the procurement of higher things.

DISCUSSION OF REPORT ON RURAL SCHOOLS

SCHOOL MAINTENANCE

A. S. **Draper** opened the discussion of theses found on pp. 53 and 54 of the report, and expressed hearty appreciation of the thoroness and candor of the report, and the logical reasoning for its conclusions.

W. E. **Sheldon** believed the state should control, and that the small unit of the district was too liable to fail to accomplish the best results in administration.

Dr. John T. Prince, of Massachusetts, stated that, while Massachusetts has no centralized system, it does not need the centralized system in operation in some other states.

Local taxation gauges the degree of efficiency, the degree of taxation which the local communities are willing to give themselves, the effectiveness of the schools. We must rely on the intelligence of the community; and we must keep active those forces which cultivate this sentiment. In this work we must look to the teachers.

There is, it is true, too much petty politics, leading to the employment of personal friends. We believe no teacher should be employed who has not certain qualifications—the equivalent of a graduation from a state normal school of at least two years; and that no teacher should receive less than $500.

Ellen C. Sabin.—In the state of Wisconsin we have been under the district system. We are working toward a larger unit. We find that our country schools are too largely in the condition described in the report.

Mr. Hinsdale said the taxing unit must be such as can be carried; the question is very different in different states.

E. **Oram Lyte** asked if a percentage unit can be established.

R. G. **Boone** thought the percentage would constantly change.

Mr. Hinsdale, in closing the discussion on "School Maintenance," said it was easy to overdo system, assuming that, if the system were right, everything would be well. He believed in system, that is, in good system, but no system, however good, was worth anything unless it was well worked. Efficiency—results—was the standard. For example, altho he had firmly fixed ideas about the organization of city schools, he would not think of disturbing an organization that was now working well, because it did not conform to his theoretical ideas. The man who would do so was a doctrinaire; while he avowed himself to be an opportunist—provided he was allowed to define the word—he did not mean, necessarily, that the small unit should go first; he meant only that the small unit should certainly contribute its share, and that such contribution should be made compulsory.

The relative merits of rural and urban schools were not altogether an easy question. There was, however, reason to think that the advantages sometimes claimed for rural schools should really be carried to the credit side of another account.

Country life, communication with nature, close contact with real things, were most wholesome and helpful in the development of character, and often overcame defects of school education; but the real question was whether some of the good features of the urban schools could not be brought into the rural schools without diminishing in any way or to any degree the compensatory advantages that rural life now enjoys as compared with city life.

SCHOOL SUPERVISION

BY SUPERINTENDENT N. C. DOUGHERTY, PEORIA, ILL.

[ABSTRACT]

The existence of the rural school, Mr. President, is, it is true, neither threatened nor opposed, and yet shares the danger of every accepted institution. The danger is that the purpose which gave it birth, and the spirit which at first gave it a vigorous life, will or may degenerate into a dead mechanical force and an unmeaning routine. The rural school is the school of the people. From it, in the future as in the past, must come the majority of those who will pursue a scholastic career in our colleges and institutions of higher learning; and from it will come, also, most of those who are destined by native force of character to create the great fortunes, and to wield the potential influences, of the next generation. Either this is true or it is not true that history repeats itself. The improvement of the rural school is a question of greatest importance to this Council. This report holds that there must exist between the superintending power and all connected with rural schools — children, parents, teachers, and school officers — the closest possible relation. The superintendent stands in a peculiar relation to these schools, and they are peculiarly susceptible to his influence. The test of his efficiency is the efficiency of his schools. The report points out:

1. The superintendent must be one who can discern and appreciate the higher elements of teaching power. He must be a man, not only of general intelligence, but one who has studied the profession of teaching. He must determine whether or not the candidate for teaching possesses qualities not nominated in the certificate, but which are essential to his success. He must see that the teacher, in addition to a knowledge of arithmetic, geography, reading, etc., possesses tact, sympathy, earnestness, firmness of decision, and, above all, strict conscientiousness. He must sustain and encourage his teachers. The isolation of a country teacher makes him to be in peculiar need of such encouragement. Working alone, as he does, seldom meeting his fellow-teachers or receiving words of cheer from them, he often sinks under a weight of sheer loneliness and fails to do his best, simply because there is nobody to appreciate the best when it is done. Such a teacher needs the strength which the sense of companionship affords. The weakest teacher, strengthened by assurances of fellowship, goes to his work sustained by the strength of all. The superintendent, therefore, must be the link which connects these isolated teachers with the electric current of his entire county.

2. The report shows that the superintendent must also be an inspector of schools. The character of the inspection will go far to determine the character of the school. Without it, qualification and opportunity avail little. The teacher is strengthened when he knows that his work is to be tested; when he knows that he is to be answerable, in a definite and tangible form, for the manner in which he does it. It seems to me, therefore, that a rigid inspection of rural schools is an indispensable condition to any great improvement. Better to the young teacher than books; better, in some respects, than the best schools, is the criticism from those who have had similar difficulties, and who have solved these difficulties.

3. The superintendent must not only have the power to arouse enthusiasm in his teachers, and in the pupils of his schools, but he must also touch, by his influence, every home in his county. He must be a leader of thought and opinion. He is the creator of educational sentiment, and that sentiment will be what he makes it. He finds most of the parents of his county destitute of knowledge respecting school methods. He finds that few of them have any conception of a better school than the one taught in their own

district. He finds that few of the school officers have any knowledge of what constitutes a good school, or of what is necessary to improve one. But he cannot enter the home life of his people without being convinced that, whatever outward evidence there may be to the contrary, these people do desire the right education of their children, and are willing to make any sacrifice to secure it. It is, however, so easy for them to believe that, when all is quiet, all is well, and to feel that the obligation to act rests upon their neighbor instead of themselves; that year after year goes by and little is attempted and little accomplished toward the improvement of their schools. The impulse to better views and higher influences must originate with those who know and feel the importance of education, and of making education the very best that it can be made. This duty rightly falls upon the county superintendent; hence, a successful superintendent must be an agitator, because agitation is the first step toward purification; the first step of progress. If we would have better schoolhouses, better teachers, better schools; if we would have our rural communities reach any higher ground in educational matters; then the county superintendent must arrest the attention and awaken the thought of the community, until it realizes the importance of the work it has neglected, and feels that, in so neglecting it, a grievous wrong is being done its own children. Let the good the people should aim at, and the evils which they endure, be clearly shown them, and it will be found that there is no lack of interest, there is no indifference, in the subject of schools. It will be found, also, that when the people are once aroused, they find a way to act, and are willing to give freely of their time and means to secure the best training for their children.

N. C. SCHAEFFER.—The report does not claim to have said the final word on the supervision of rural schools. So long as there is growth and progress in life, there will be new phases of education for superintendents to define and discuss. I wish the report had given us more light on how a superintendent may earn his salary. A book agent, who was asked what question interests superintendents most deeply, next to drawing their salary for the current year, replied: "The question of drawing it *next* year." The new superintendent invariably talks about the course of study he is introducing, but, after he has been at work on it half a dozen years, he is very anxious to learn about vacancies elsewhere. To retain his place, the superintendent must not only make people believe he is earning his salary, but he must actually earn it.

How is this possible when he gets from $2,000 to $5,000 a year, while the teachers in the lower grades get only as many hundreds?

Not by perpetual revision of the course of study, nor by a vigorous policy of doing nothing while busily engaged in visiting schools, nor by dispensing that compound of acid and alkali called criticism, the chief ingredient of which is fault-finding.

Least of all can he earn his salary by perpetually preaching the gospel of a new education. That may impress the community with a sense of great reforms to be achieved, requiring time and tenure of office if they are to be successfully carried out.

Occasionally radical change becomes necessary. Generally the attempt at radical reform robs the teachers of joy in their work, makes them believe everything they have been doing fundamentally wrong, and increases the crop of patients which physicians get from breakdown and sleeplessness.

How does the manager of a factory earn his salary? If, by superior skill, wise direction of the work, scientific knowledge of how everything should be done, he prevents waste of effort and of raw material; if he arranges the machinery to the best advantage, organizes labor for common ends, thereby enhancing the quantity, quality, and market value of the product, so that the profits are increased from $50,000 to $100,000, who can deny that he has earned a salary of $10,000 a year, while the workman earns but a small sum in comparison? Brain products cannot be exhibited like those of a factory; but brain waste is worse than waste of raw material.

Waste of effort in the school is worse than waste of steam and labor in the factory. A poor superintendent is too dear at any price; but a good superintendent is worth many times his salary. By preventing the waste of time, money, and effort; by getting done what ought to be done; by excluding school politics and other politics from the appointment of teachers and from the management of the schools; by efficiency in the discharge of his duties as executive, examiner, visitor, and counselor; by the creation of a public sentiment that demands good teaching above all other considerations, he may earn his salary many times every year, and feel secure in his tenure of office, even after his strength begins to wane.

In response to questions, Mr. Schaeffer said the state of Pennsylvania is one of the first to stand for supervision of rural schools; the highest salary paid to this office is paid in this commonwealth. The man came from a district where they have those large works of Carnegie, where the superiority of "brains" is illustrated. A special provision of $98,000 is made to pay rural superintendents.

CHARLES R. SKINNER commended the report of the committee, and called attention to the great numbers of the report published and circulated in the states of Michigan, Ohio, Kansas, and New York.

SUPPLY OF TEACHERS

BY PRESIDENT JOHN W. COOK, STATE NORMAL UNIVERSITY, NORMAL, ILL.

The rural-school problem is like all of our other problems in which the conditions are similar in character. The situation demands good talent, and, as everyone knows, good talent costs money. More: persons who are qualified to do anything like superior work expect conditions that shall at least be ordinarily favorable. I need not say in this presence that the average rural school presents a combination of difficulties that are in many ways discouraging. They are usually small, the average attendance in many states of the union being scarcely more than twenty. School appliances are usually lacking, or are at best but meagerly furnished. Good boarding places are rare. The roads are bad during a good part of the school year. In localities where the tenant class forms the chief part of the population the tax levy is kept at the lowest possible point by the selfishness of the landlords. It is by no means an unusual thing for the landowners to have understanding with the renters as to the amount of public money that shall be voted for school purposes. The school year is rarely more than seven months. If extended by a summer term to eight or nine, the attendance is so small and the pupils are so young that the cheapest candidate is secured. In the presence of all of these disheartening conditions it is not strange that many county superintendents should confess that in a deplorable number of cases the schools are of little value, and that the children derive the smallest advantage from attendance.

It is the easiest of tasks to prescribe the remedy. There should be good buildings, centrally located. The tax levy should be large enough to provide modern furniture, proper blackboards, apparatus, reference books, maps; most important of all, a good teacher. How easy it is to say it, and how hard to realize it! But the problem remains and must not be given up as insoluble.

Doubtless we are directing our energies at the right point when we attempt to secure for these schools a better supply of well-prepared teachers. There is nothing else that will go so far toward the improvement of the school sentiment in any community as a good school. I have had several illustrations of this palpable fact within the last six months. A really successful teacher establishes a criterion by which public opinion estimates all subsequent efforts. In a somewhat extended correspondence with school officers within the few weeks just passed I have been especially impressed with the revolution that has taken place in certain communities in the sentiments of the people with respect to the value of professionally prepared teachers.

There is a common misapprehension respecting the character of the schools into which the normal pupils go. It is doubtless true that the large majority of the normal graduates find employment in town and city schools. In my own state we have been unable to retain for our graduating classes thus far more than 7 per cent. of the whole number of students matriculated. There are several reasons for this unsatisfactory showing that I shall not stop to discuss here, but one potent influence is the demand for teachers who have had even a single year of normal-school work. While this demand comes in no small measure from the towns, it is materially stronger from the rural schools. In the school with which I am connected we have three courses of study. Graduates of the best high schools are admitted to a two-year course. Unfortunately a considerable majority of these pupils remain with us but one year, as they readily find employment in their home schools after that amount of professional discipline. Nearly all of these students go into the graded schools. Graduates of high schools of lower grade are admitted to a three-year course. They are disposed to remain longer. The average period of their attendance will probably reach a year and a half. Without having reliable statistics at hand, I venture the assertion that they divide about equally between the town and rural schools. A third class is composed of those who have received nearly all of their training in district schools. They are older than either of the other groups, and, while inferior to them in scholarship, are harder workers, are more serious in disposition, and are more willing to endure the comparative inconveniences of country life. They grew up on the farm, attended the district school, have not been demoralized by the Capuan luxury of the town schoolhouse, and are contented to return to the familiar life of the country to begin their work as teachers. A highly respectable percentage of them take high rank in their classes and in the work of the practice school. They understand country ways, are satisfied with country living, and get on well with country people. Many of them "farm" thru the long vacation, and teach the district school during the fall and winter. They become resident teachers, continuing their services in the same locality for several years. It is to be regretted that there are not more of this class of teachers. The farmer girls teach for a term of years, and many of them marry farmers. Their services to education are by no means lost by such an arrangement. In all matters of educational influence they are to be counted in as potent factors.

The point to these remarks, if they have point, lies in the proposition that an effort should be made to recognize this class of teachers and to give them opportunity for professional training. The plan of admitting to normal schools only graduates of high schools will take away from them about the only chance. I am prepared to oppose the assertion that they are unfit for such a discipline. The mind has a method of its own of gaining power. The nutriment contained in the common branches is really quite surprising, when such subjects are pursued by relatively mature students. If I were to recite the names of men and women now prominent in educational circles in this country who came from the district school to the normal schools and went from them to the work of teaching, it would surprise many who will hold against my position.

It has long been my conviction that the outcry against what has been called "academic work," in normal schools, has come from many who have little notion of the character of such work. I have no apology to make for its presence in the schools with which I am most familiar. It is not academic work in the sense that the grade work or the high-school work is academic. The first requisite of a good teacher is a thoro familiarity with the subject in which he is to give instruction. The high-school graduate is years away from the work of the grades. It is the common remark of normal-school teachers that such pupils seem to have forgotten all that they ought to have learned of such subjects as they will be called upon to teach in elementary schools. A well-known principal of a famous city normal school remarked in a recent interview that the most surprising fact of his experience is the ignorance of the average pupil who has gone thru the twelve years of the ordinary city system.

It is my contention that the condition of such pupils should occasion no surprise. They have not pursued the subjects in a way to meet the purposes of the normal school. A new examination, from a different point of view, is necessary. Any method that deserves the name must surely take into account the logical unfolding of the subject. A rigorous examination of the studies of the curriculum reveals exactly this phase of their organization. And this it is that is called "academic work." So far as my observation has extended, every normal school has it to do. To my mind, it is professional treatment. So many normal-school people aspire to what they call "pure professional work" that a certain sensitiveness has developed in regard to this aspect of their work. It is the boast of some of them that they spend no time upon it. I have never looked for it, however, without finding it. It is my conviction that it has a legitimate place in the normal school.

Such institutions, then, will educate in a general way so long as they deal with the subjects of instruction in this half-academic fashion. As a result, the normal schools will do more than simply professional work. This fact will attract to them people who do not expect to make a life work of teaching, but who will follow it for a term of years at a somewhat small compensation. The district schools will get a fair share of this class of normal students.

And so I am of the opinion that the main reliance of these schools is upon the normal schools, both directly and indirectly. To help them more efficiently directly, however, the normal school must change its plans somewhat. Since their teachers are employed for a part of the year, an effort must be made to get them into the normal schools during, at least, a part of their vacations. Free summer schools, of not less than six weeks, must be maintained, and a strenuous effort must be made to afford board and all necessary supplies at the lowest possible rate. It seems, indeed, a shame that we should be obliged to haggle over the price of things when the education of a people is at stake, but it is a necessity in the interests of the district schools in the present condition of affairs, and that condition of affairs is likely to continue for some time to come.

And it is quite surprising to see what can be done, even in so short a time as I have indicated. Indeed, many of these schools are so poor that almost anything will improve them. In making so severe a criticism, I do not forget that some of them are decidedly superior to the average town school. Yet I have no disposition to temper my statement. In an experience extending over a third of a century I have frequently seen a transformation little short of miraculous as the result of a single term at the normal school.

I am aware that these statements may seem a trifle exaggerated. They are the very soberness of truth.

The work of the summer school for teachers of rural schools should be in the highest degree practical. I use the word in its most common acceptance. In the states having substantially uniform courses of study for rural schools such courses should furnish the main material upon which effort should be centered. It goes without saying that no one should be admitted to these courses whose purpose is not to become a teacher. In the examination of the courses of study deficiencies in academic preparation will appear. Then is the time to remedy them, so far as they can be remedied. The study of method naturally allies itself to the work as it develops. Here, also, arises the opportunity for the examination of the most simple and obvious facts of child growth. To the average pupil the psychology of the books is dry and difficult, and seems to have little bearing on the teacher's work. It is quite surprising to most people to find how large a stock of knowledge of mental action they have accumulated in the ordinary experiences of life. They have never inventoried it under the caption of psychology, and would plead entire innocence of any acquaintance with such a science if asked about it. It is a first duty of a teacher of teachers to attempt to bring to the front and systematize this random knowledge. This is done better by the way, in most cases, than by the book method. When a pupil has been given a start in the way of organizing his knowledge and experience around a professional core, far more has been done for him than we have often suspected. Indeed, since so many of the pupils of this class will remain in the professional schools for only a short time, a start toward future study is the best thing that the circumstances will permit. Nothing is easier than to indulge in large talk about thoro professional discipline. It is, at present, out of the question for the rural-school teacher. Such an attempt will simply discipline him away from the rural school. We must learn to think more highly of the day of small things in this field of educational effort.

I have experienced a change of conviction in regard to another matter which has been discussed at some length in certain quarters. In states in which the number of normal and summer schools is limited I am convinced that we should make strong efforts to establish training schools in connection with township high schools. I have no doubt that much good can be accomplished by such agencies. The crying need is suitable teachers for such institutions. The normal schools can do much in the way of supplying them, doubtless. But school authorities are not always open to advice. Incompetent teachers will have charge of them in many instances, but some good will be done and the principle will have a recognition. The normal schools have been obliged to work themselves into professional lines, so far as they have succeeded in getting there, and there will be a similar experience with the small training schools of which I am speaking. It is high time to get them started. Their improvement will be a subsequent problem. If we shall wait until training schools will spring into full life at the instant of their inception, we shall wait for an educational millennium. Once established, criticism and competition will work wonders in correcting their faults.

Am I in error in saying that there is great need of simpler books in pedagogy? In order that a book shall make its way with the average reader, it should be interesting. If it shall be charged that I am so touched with the Herbartian doctrine of interest as to be led to cater to a low educational sentiment, I shall endure the stigma with such philosophy as I am able to summon to my aid. Nearly all of the books that are most highly commended to teachers are found to be too difficult for beginners. They ignore, to a greater or less degree, the doctrine of apperception of which they talk so learnedly. It is the plain duty of sensible people to accept conditions as they are, and to attempt to improve them. We are using too heavy artillery for the teacher of the rural school. The high curve carries the projectile over his head. There should be more level shooting at short range. Where is the man or woman who can treat the so-called trivialities of the schoolroom in such a way as to win readers and thus to correct the most common and fundamental faults? This is the day of the story. Have we anything to learn from this palpable fact? Preaching to small congregations on the sin of absence is simply talking to people who are not there. We are imitating this familiar folly in much of the educational literature intended for the teachers of whom I am speaking. I am looking for the development of a most helpful and highly practical set of manuals in connection with the state courses of study that are gaining such a foothold in many of the western states. They will grow out of the study of the rural schools by those who are most familiar with their needs, and will be leveled to the comprehension of the teachers to be benefited.

But, after all is said, the most urgent need is an improved system of supervision of the rural school. Until this is secured, the improvement will be slow and halting. The remedy should first be sought in the abolition of the antiquated district system. The situation can but be grotesque, when there continues to be an army of forty thousand school officers in a single state. The county superintendency is a failure, so far as overseeing the work of the teacher is concerned. The town schools owe such superiority as they possess to the fact that teachers are in close touch with each other, and with a principal, more than to any other one thing. When the primary teacher understands that her work is to be tested by the teacher of the higher grade next year, she feels a degree of responsibility not otherwise easily developed. Where there is more than one teacher in a school, the spirit of criticism, competition, and of a phase of supervision enters. It may not always be the supervision of a competent principal, but it is supervision all the same. When there is added the critical examination of a competent overseer, the good influence is immensely multiplied.

The adoption of a sensible township system introduces into the district school the elements that work so advantageously in the town schools. Isolation—the bane of the country school—will, in a great measure, disappear. Something approaching organization and co-ordination will take its place. Teachers thus become united into groups with common interests. Meetings for mutual improvement become possible. Classes can be organized for the study of the same thing. The principle of social attrition enters. One good teacher may be so used as to leaven a dozen. Best of all, there will come, at least, the dawning hope of competent supervision. While there will be good schools here and there without it, there will never be anything else. Business enterprises are constantly taking in new workers at the bottom and educating them for their tasks by watchful oversight. Errors are promptly discovered and as promptly corrected. The novice finds himself in a school where those who are above him become his teachers. He is under constant criticism and correction. He is not obliged to discover the art of doing things all over again by himself. He enters into the experience of those who have gone before him. In our educational methods we seem reluctant to profit by the plain lessons of the past. In this department of our social life democracy has gone to seed. I have heard intelligent men argue for the old system on the ground of its furnishing a training school for office holding and for cultivating an interest in public affairs. It is possible that there is some force in the suggestion. Doubtless the system has some advantages. But the cost is too great. Let us devise some method of satisfying the American passion for office holding that will not jeopardize our highest interests.

BY CHARLES B. GILBERT, SUPERINTENDENT OF SCHOOLS, NEWARK, N. J.

Rural schools should have a permanent body of teachers, men and women who have adopted teaching as a life work, who are especially interested in the rural schools, who feel that they open a satisfactory career and are willing to take such steps as are necessary to equip themselves for such a career. The following suggested measures would stimulate the creation of such a class:

1. The rural school year should be as long as that of the urban school, nine or ten months.

2. Employment should be for at least a year, with continuance of tenure contingent only upon success.

3. Compensation should be adequate, to make the positions attractive. It need not be as high as in cities, because the lower cost of living may be taken into account, but it must be sufficient to furnish a living equal to that of the average respectable inhabitant of the rural communities.

4. Opportunities should be offered to teachers of rural schools to take professional courses, and make progress in the profession.

These courses must be so arranged that they can be taken without the sacrifice of an incommensurate amount of time and money. Various means may be employed to provide these courses, such as are mentioned in the report. Normal schools of various grades, according to the requirements for admission and graduation, especially devoted to the needs of rural schools might profitably be established.

5. Various grades of certificates should be offered, and salaries should be partially determined by the grades of certificates held by the teachers.

These certificates, from the lowest to the highest, should be obtainable as the reward for completing certain prescribed professional courses, provided that for obtaining certain higher certificates a record of successful teaching experience should be required in addition. This would furnish rural teachers the necessary inducement to take professional courses, and would tend toward the creation of a permanent class of rural-school teachers.

INSTRUCTION AND DISCIPLINE

BY DR. R. G. BOONE, STATE NORMAL SCHOOL, YPSILANTI, MICH.

In its report on "Instruction and Discipline in Rural Schools," the Committee of Twelve named as "remedies for the evils of the rural schools":

1. Transportations to central schools.
2. Improvement of roads.
3. Special appropriations for certain rural schools.
4. Concentration of the higher grades of pupils.
5. School exercises at the town or county centers.
6. A guarded use of competitive examinations.
7. The promotion of home readings.
8. A system of school extension.
9. Incidental monitorial assistance.

These nine suggested "remedies" are taken from the summary made by the subcommittee, and included in its report on pp. 106–12. They cover, in the judgment of the committee, the conditions for the improvement of the rural schools incident upon the non-social character of the rural communities.

In the body of the report it is recommended, also, that all such schools be "graded in the sense that they will have a course of study, and that the pupils will take up their branches of study in due order, and these studies will be associated, so that a given degree of advancement in one study implies a given degree of advancement in another.'' It is recommended, further, that "the course of study in the rural schools should be substantially the same as that of the city schools;" and, likewise, that "the discipline of the rural school should be strict, tho mild, like that of the city school."

On p. 15, also, of the introduction Mr. Sabin, the chairman, mentions, as "the most important subject intrusted to this subcommittee," that of "the training and preparation of teachers." Normal training classes having short courses are recommended. Continuous sessions in normal schools promise much for the improvement of rural-school teachers. One argument for the consolidation of schools is that "it will make possible the employment of better teachers, and promote good instruction." Intelligent "supervision" is named as one of "the vital needs of the rural schools;" and the need is emphasized because of the unstable, as well as raw and unfit, quality of their teachers. "The best work of a supervisor is his skill in selecting teachers."

This paragraph is inserted as calling attention to the relatively small consideration given by the report to the exercise of teaching functions in the rural schools, and the unfitness of the average rural teacher for teaching, and the means at hand for his improvement. Dr. Rounds, as chairman of the Subcommitttee on Supply of Teachers, argues that, "in order that the rural school may be supplied with better teachers, ... (1) there must be in rural communities a clearer appreciation of the qualities essential to a good teacher;" (2) the school year must be lengthened to not less than nine or ten months, so that along with a "year's work" may go a "year's wage," as a condition of retaining in suburban and rural communities accomplished teachers for continuous service; (3) inexpert and perfunctory supervision must give way to professional control. To the end that teachers in these outlying districts may be improved, the various recognized agencies are characterized and commended: (1) state and local associations; (2) extended summer schools; (3) normal and county institutes and short conventions; (4) libraries; and, finally, besides a better-digested system of examination and certification of teachers, (5) teachers' normal and training classes, and especially summer sessions of the normal schools for the especial benefit of rural-school teachers. Here are twenty-two recommendations for the bettering of the rural schools, as set forth by the chairman of the original committee, or by the two subcommittees; about one-half of them being immediately concerned with matters of organization, and the others with administrative processes or the handling of the school machinery. In what ways the teaching itself is poor, and why it is poor; what is good teaching for the children of farming and sparsely settled districts; how the discipline of the rural school may be made mild and as satisfactory as that of the city school, seem thruout the report to be rather taken for granted than discussed. Appendices G and H are very suggestive.

All this is said, however, not at all by way of criticism of the report, either in its spirit or its letter; but rather to note the consensus of opinion that the fundamental questions of the rural-school problem are questions of administration chiefly, when not questions of organization. It seems to be nowhere supposed that the pedagogical processes of mental and moral growth are not identical for both urban and outer districts. This seems to be a long step, and in the right direction. Obviously the difficulties as they appear to the committee are the real difficulties.

Instruction and discipline constitute together one aspect of the school. The supplementary aspect is that of organization. The former comprises teaching, and the several purposeful exercises directed by the teacher toward educational ends. The latter regards the system so-called, and the various mechanical and prudential arrangements designed to make the teaching exercises effective. Of these two, this is an incident of that and depends upon it for whatever significance the organization has and the form which it assumes. No consideration of plans and machinery and equipments and money support, salaries and school years, examinations and certificates, central schools and consolidation, gradation and classification and promotions, can carry any adequate influence except as these matters are seen to change, as the meanings of education and teaching change. There is no virtue in any system of gradation, except as it better meets the human needs of the child or the adult, in his individual or social relations, or both.

The five theses here presented for our present consideration are:

1. The advantages arising from grading small country schools are more than counterbalanced by the disadvantages of teaching together pupils widely separated in ability and acquirements.

2. Whenever practicable, the pupils of small outlying districts should be transported at public expense to the town center; this plan may embrace all the pupils of the district or only the older and more advanced.

3. With the limitations suggested in the report, the monitorial system can be employed to advantage in rural schools.

4. Where rural schools are maintained, written examinations should be held at stated times in town centers by some competent officer, adequate record of the result of the examination being preserved for future reference.

5. For those who have left school, "school extension," in form of recommended home reading under the care of the teacher of the district, should be organized and directed by the town or county superintendent.

These theses obviously assume that the quality and purposes and conditions of right teaching in the rural schools have been agreed upon. Of the five, but two, the first and the last, take hold in any close way upon teaching. The others have to do chiefly or entirely with administrative organization: these include (*a*) the policy of concentration, or the combining of several small grades or schools into a few; (*b*) the selection of assistance thru the monitorial or cadet system; and (*c*) the central control of examinations and the preservation of records. These are important; but far less so, it would seem, in the present stage of development of the rural schools, than the preparation, selection, and employment of well-qualified teachers, and the use of sensible and well-digested methods.

One plea in the argument for free transportation of the advanced pupils from outlying districts to a central school is that in this central school a better quality of instruction may be offered thru the use of more abundant equipments and the employment of better-qualified teachers. But let it not be forgotten that the duty which we owe to the rural districts will not have been fulfilled until every school in the remotest corners, large enough to be maintained at all, is provided with as good instruction and as devoted teaching intelligence as are furnished in the central school. So that the policy of consolidation is an economic one and not a pedagogical necessity, and derives its chief significance from the application of a principle that should operate not less to the advantage of the small, undifferentiated school than to that of the large, graded, and long-termed school with city connections. Similar observations might be made of items (*b*) and (*c*) above, concerning monitors and the more formal examinations emanating from the central office.

The dangers incident to the over-grading of small country schools seem to me to be overrated; or rather, the difficulties, while the natural results of an unintelligent attempt to apply a course of instruction to a small school, are yet of a kind that quickly yield when good sense in the teacher and a familiar acquaintance with the local conditions are consulted. This difficulty, to the degree that it is a difficulty at all, resolves itself into a question of education in a larger sense, and vanishes when it is once understood what the school's business with the child is and what it isn't. It aims, or should aim, to enrich his life by an abundant and elevating experience — the safest, most wisely chosen and projective experience — and not at all to parallel the experience of an other, of any other. It is not to be inferred that there is not here a serious situation of affairs, and one that deserves the ripest insight and maturest reflection for its resolution; but simply that the questions of close or loose grading, frequent or infrequent promotions, and the complexity of the machine, must find their answer in interests that lie beyond organization and management and the machine — in the nature of the educative process.

Of all of the five theses named, the last offers opportunity for the most far-reaching consequences to both individuals and neighborhoods. It is obviously not a school question at all, or only incidentally such. "School extension" is in the interest of those who have left school. At least this is the class had in mind, evidently, by the committee making the report. It is a relatively large class — even in the country. In every state the aggregate of schooling is small among the children of farmers. Generally the months of actual attendance at school are fewer each year than in the cities. Both during the school period in the months of continued absence from school, and subsequent to the school period, this extension study might go on. The farming class is not by any means strongly persuaded of the large utilities of a sound education. It has not, I am convinced, been made clear that one farms better, or is more industrious, or thrifty, or influential in his neighborhood, or of sounder business judgment, because of his formal intellectual training, his wide and choice reading, and travel. The first requirement in education extension, therefore, is this, that the rural adult public shall be given or shall acquire a cultivated sense of not only the economic, but the æsthetic and ethical values of a well-disciplined mind and a chastened life. The connection must be made in some way between the literature of Thoreau and Burroughs, and their kind, and the best life possible to a cultivator of the soil; that a critical appreciation of excellent literature, an acquaintance with the proved results of recent science and invention, and the pointings of the laboratory and the shop, and a habit of watching public interest and efforts in these directions, makes an otherwise isolated life bearable, procures one leisure and something of ease, exalts one's own reflections by reinforcing the experience of each with the contributions of many, and furnishes a standard of excellence and efficiency for even the commonest labor and service of the farm. This education extension ought to reach the fathers and mothers, thru lectures, thru literature introduced into the homes, thru making the schoolhouse a center of intellectual movements during the leisure months of the year, and thru interesting the children in carrying on some independent lines of investigation or skill in their homes. In our own state of Michigan not a little has been accomplished in this way by means of the Farmers' Reading Circle, organized with the encouragement of the state board of agriculture and the Agricultural College, and under the immediate direction of the county school commissioner. The corps of instructors of the local high school, or a near-by college, might well make its resources available to enrich the local out-of-town life. Of course, this must be done by connecting the expert knowledge of the school or college with what constitutes the dominant interest of the people to be enriched. Here, as elsewhere, it is less important that they shall think about any particular movement or interest, than that they be brought to think, and think about their work in its larger relations, and their own lives as meaning something more than toil and privation, or abundance and the accumulation of material possessions. It must be conceded, I suspect, that the prevalent conditions of farm life, as most of us know it, tend toward a narrowing of spiritual interests.

> "This great, round, wonderful, beautiful world,
> With the wonderful waters around it curled,"

does not greatly impress with its wonders and beauties the slave of the seasons—the average American farmer. Ground must be put into condition for seeding, the seeding must observe times as well as seasons, monotonous and uninspiring toil follows during cultivation, harvesting in heat and hurry, putting the season's product upon a vacillating or decrepit market; and along with and in the midst of it all, the stock must be cared for, fences must be repaired, the drainage must be looked after, the woodlands cleared of fallen timbers, repairs of farm equipments and barns cannot be neglected—and the feet of even the well-to-do farmer seem bound to earth. Nevertheless, the elevation of the rural sections must carry, along with all this, faith in the sanities of a richer spiritual life, participation in others' thinking and living, confidence in learning and the invitations of an abundant culture; and the possibility of enjoying all this, while professionally responsible for the maintenance and management and promotion of a successful farm business. To reach the end sought, the more abundant life must not take families from the farm, but make life bearable on the farm. This result is already in promise in parts of our country. The outlook is not disheartening. The improvement comes slowly, but it comes. The schools, were they in the hands of capable, scholarly young men and women, who themselves believe in the regenerations of a sound mental training, might do much to hasten this amelioration of the social condition. As in every community the church is the center of the religious life, its service and ceremonies, so ought the schoolhouse to be in every neighborhood the point of convergence and divergence of its intellectual life. The net result of the world's best thought and achievement, as it may be found naturally to appeal to their local interests, should emanate from the school. Free discussion of great ideas and public affairs should receive the patronage and encouragement of the school. Wide reading will inevitably result to supplement their own thinking. Libraries will soon be regarded as a necessity. Traveling libraries will be made use of generally, as they are now employed in a few states. It is not so necessary that, for the accomplishing of all this, the teacher be scholarly beyond her neighbors and patrons; but, as one of them, seeing clearly herself the need of such elevation of the community life, and with a conviction that the want may be satisfied, the school, thru her co-operation, may be made the rallying point of the community's intellectual movements. So much for "school extension" for the adults. What can be done for the young out of school and away from lessons?

School extension for rural districts has, in one way or another, been successfully undertaken in Indiana and other states, thru the Young People's Reading Circle, which is under the immediate direction of the local teacher; in Michigan, in part, thru the grange societies; and in both, and elsewhere, by university and college extension classes and experiments.

The following theses may fairly be taken to summarize what needs to be further said in this connection:

1. The teaching of the school has been good to the degree that the interest accompanying or aroused by the lessons has persisted and followed the child to his home after school hours.

2. The teaching is better if the love of books and an interest in affairs, and a habit of seeking adequate explanations for whatever occurrence, have become a guiding impulse after school attendance has ceased. Not much can be done with extension studies, unless the influence of the school has been found satisfying and authoritative. There must be in the minds of the outgoing youth confidence in the intelligence and good will and the unselfish endeavor of the school. If they have believed in the teacher during school days, they will more easily believe in her after school days.

3. In a systematic way, upon his permanent withdrawal from school, every child should be reached by the teacher with purposeful plans for his improvement: not dogmatically and prescriptively and with any show of dominating his opinions and interests, but furnished with the conditions of his best growth therein. If the school could really make its influence felt in a helpful and far-seeing way for five years after the day of recitation, the problem of how to effect the elevation of the rural community would have been solved.

4. The principle of the multiplication of results thru associated efforts should be used in the organization of clubs, societies, and circles, grouping those whose interests are common, and associating with each group someone fitted by nature and attainment to be a leader, at least an inspirer and courageous comrade. This may be the teacher, or a local physician who is a student, or a broad-minded clergyman or lawyer, or a man or woman of travel and cosmopolitan experience, or anyone of acute and critical, and, at the same time, sympathetic, insight into the finer meanings of nature or art or life. These groups, of youth or adults, may be large or small; the circles will have a masterful leader or exist under a thoroly democratic organization; it is a fairly liberal education in itself, for five years emerging from adolescence, to have exchanged with one's fellows one's best thoughts on whatever deserving concern; for five years to have escaped the tyranny of the trivial; to have established the habit of beholding and interpreting truth in an impersonal way, and to have found such life attractive.

5. The subject-matter of this extension work is relatively unimportant. The statement should need no argument, and before this audience does need none, that such after-school intellectual pursuits should increase, not diminish, the respect for the simple industries of the farm, a healthy content with its high possibilities, an appreciation of the manifold opportunities afforded by nature and the accompanying occupations for personal regeneration and spiritual promotion. Primarily the studies may safely be such as grow out of the rural conditions, the pastoral and agricultural life, and the plain, undisguised instincts of unspoiled nature. You will, of course, see that even so there shall have been omitted no great brute and human problem, tho the view will obviously be elementary and partial. Upon the farm, scarcely less than among men in urban centers, may be found the beginnings, if not the mature developments, of man's almost unqualified dependence upon this wonderful inert nature; the primary relations that we call ethical;

the root forms of history; the first rude steps in human art; the genesis of institutions. Reflection upon the great world problems may be as well begun here as elsewhere.

6. True, there are further developments; and readers who have done so much will be led on to do far more work. As my final thesis I quote from the subcommittee's report (p. 110): "It is desirable that the course of home reading shall not be one-sided, but shall move in each of the three directions: literature, including poetry and prose; science, looking toward the organic and inorganic kingdoms of nature, the plant, animals, and the details of matter and force; and toward archæology, ethnology, and sociology, and politics, history, biography, and art."

This may all be well beyond present attainment; nevertheless, it is believed that the committee has seen and spoken wisely, and the ideal has a permanent value. Moreover, the attainment is not wholly ideal; something of it is within easy reach of the better communities of our day. With adequate instruction in the schools much more may be effected. Libraries will be formed; home life will be vitalized; account will be taken of the country's attractions not less than its economic utilities; in society's division of labor and the redistribution of population, the country will receive a larger recognition; and a beginning will have been made toward resolving certain municipal conditions. "School extension" is not a panacea, but its known good effects justify large confidence in its promise.

DEPARTMENT OF KINDERGARTEN EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—FRIDAY, JULY 8, 1898

The department met in Calvary Baptist Church, Washington, D. C., at 3 o'clock P. M. Mr. B. Pickman Mann, chairman of the local kindergarten committee, on behalf of the city kindergartners, welcomed the visiting kindergartners to Washington.

Miss Mary C. McCulloch, of St. Louis, Mo., the president of the department, responded to the address of welcome.

Miss Grace Fulmer read the paper of Miss Elizabeth Harrison, principal of the Kindergarten College, Chicago, Ill., who was ill in the city, on "Froebel's Mother-Play Songs — the Ideals Suggested by Them."

A communication from Dr. W. N. Hailmann, president of the Elementary Department, was read, suggesting a joint session of the elementary and kindergarten sections on the afternoon of Tuesday, July 12.

As an interesting item of information, the secretary read the data collected from the register by Mr. B. Pickman Mann, showing that, of the 200 now registered in this department, 102 are from Washington. The ninety-eight from abroad represent twenty-seven states and fifty-three towns or cities. The states represented are Ontario, Massachusetts, New York, New Jersey, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, Kentucky, Ohio, Indiana, Illinois, Missouri, Iowa, Michigan, Wisconsin, Minnesota, Nebraska, North Dakota, Colorado, Utah, California, North Carolina, South Carolina, Georgia, and Louisiana.

The following papers were read:

"Children's Gardens," by Dr. Jenny B. Merrill, kindergarten supervisor, public schools, New York city.

"Kindergarten Games," by Miss Susan Pollock, principal of Froebel Institute, Washington, D. C.

"A Child's Song," by Miss Mari Ruef Hofer, Chicago, Ill.

The president announced the following committees:

COMMITTEE ON RESOLUTIONS

Mrs. J. L. Hughes, Toronto, Ont.
Mrs. M. J. B. Wylie, Buffalo, N. Y.
Miss Ada Van Stone Harris, Newark, N. J.

COMMITTEE ON NOMINATIONS

Miss Jenny B. Merrill, New York, N. Y.
Miss Elizabeth Harrison, Chicago, Ill.
Miss Susan P. Pollock, Washington, D. C.

The department adjourned to attend a reception and lawn party on the grounds of Mr. John E. McLean, which was tendered by the Washington kindergartners.

SECOND SESSION.—MONDAY, JULY 11

The session was called to order at 3 o'clock P. M. by the president, Miss McCulloch.

Superintendent F. Louis Soldan, St. Louis, Mo., spoke on "The Influence of the Kindergarten upon the Schools."

Mrs. Maria Kraus-Boelté, of New York city, read a paper on "The Development of the Inner Life of the Child."

A paper on the subject "A Kindergarten Message to Mothers" was presented by Mrs. James L. Hughes, Toronto, Canada.

Miss Elizabeth Harrison, Chicago, Ill., addressed the department.

The Committee on Resolutions reported as follows:

Resolved, That the Kindergarten Department of the National Educational Association extends hearty thanks to Mr. B. Pickman Mann, chairman, and the members of the local committee for the many courtesies extended to this department.

Resolved, That thanks be given to the press of Washington for the excellent reports of the work of the sessions, and for the notice of business meetings.

Resolved, That the thanks of the department are due to the officers for their valuable services in planning, and carrying out satisfactorily, an ideal program.

Resolved, That we gratefully acknowledge the kindness of the trustees of Calvary Baptist Church in granting its use for the meetings of the department.

The report was unanimously adopted.

The Committee on Nominations made its report, which was adopted, as follows:

For *President* — Mrs. Maria Kraus-Boelté, New York city.
For *Vice-President* — Miss Florence Lawson, Los Angeles, Cal.
For *Secretary* — Miss Alice M. Parker, Washington, D. C.

The department then adjourned.

MARY F. HALL,
Secretary.

PAPERS AND DISCUSSIONS

ADDRESS OF WELCOME

BY B. PICKMAN MANN, WASHINGTON, D. C.

Madam President, Members of the National Educational Association, and Friends of the Kindergarten:

The National Educational Association holds its meeting at the national capital this year for the first time in its history of thirty-seven years. The Kindergarten Department of this association is of younger growth, having been organized in 1885. By a pleasing coincidence, the establishment of the kindergarten in Milwaukee dates back to the same year.

In 1870 so much interest in the kindergarten had been excited in this country, by the labors of Miss Elizabeth Palmer Peabody and others, that the recently established National Bureau of Education was plied with numerous inquiries for definite information about the system, which Hon. John Eaton, then United States Commissioner of Education, invited Miss Peabody to come to Washington to answer.

As a result came the demand for the establishment of a kindergarten here, that its work might be seen by the national legislators, and

Miss Peabody induced a young lady, Miss Mary Hooper, to open this pioneer kindergarten. From that day to this private kindergartens in some form have been maintained in the District of Columbia, and for many years a varying number of free kindergartens have been maintained at private expense.

It has been a cause of intense gratification to me that at last these endeavors have here reached their fruition. Hardly one week has passed since the signature of the president of the United States, attached to the District of Columbia appropriation act, made the kindergarten an integral part of the public-school system of the district.

By direction of the Columbian Kindergarten Association, I prepared a memorial last spring for presentation to the United States Senate. Incidentally I then learned that public kindergartens had been established in nearly one hundred and fifty of our larger cities and towns. The significance of this wide adoption of the kindergarten is great beyond estimation. The kindergarten serves, not alone directly, but to a still greater degree as yet indirectly, in modifying the accepted school systems. Its principle of appeal to nature, and, most of all, its influence in directing attention to the nature of the child, will open up an avenue to progress as yet little trodden.

Great reforms move slowly. The inertia of the masses of the people cannot be overcome except by the accumulation of force. During the past twenty years many children have grown up whose early years were spent in kindergartens. Their lives exemplify the effects of kindergarten training. They have now reached the age when they are among the determining factors of the character of our nation. They are more receptive to the ideas embodied in the kindergarten than their fathers and mothers were twenty or thirty years ago. I attribute to this a part, at least, of the progress which the kindergarten is now making toward general adoption. This progress is, I believe, destined to continue at an accelerated rate for the same reason.

One of the most far-reaching reforms in education which we owe to the kindergarten idea is that of the cessation of the endeavor to impose dogmatically upon children the conclusions of their elders. Unfortunately this reform has not penetrated deeply, even yet, into the schools, and often the professed kindergartners are devoid of this fundamental idea, and so are false to their professions. This National Educational Association affords an opportunity for kindergartners to come into direct relations with each other on a scale commensurate with the vast extent of our country.

The leading ideas of the conference this year are the kindergarten idea and kindergarten ideals. We are all indebted to you for the feast you have prepared for us. We welcome the visiting kindergartners to Washington.

THE VALUE OF THE IDEALS SET FORTH IN THE "MOTHER-PLAY BOOK"

BY MISS ELIZABETH HARRISON, CHICAGO, ILL.

If, as another has said, "all profoundly great books are preceded by profoundly deep living," then surely this book has a place in the world's great literature. If we read Frederick Froebel's autobiography, and see the sensitive, introspective, misunderstood child grow into the earnest, aspiring youth, reaching out after knowledge in every direction, satisfied with nothing until he gets at the root of it, overcoming obstacles which have turned many a noble, ambitious youth into a commonplace drudge; if we follow him still farther, as he begins one vocation after another, only to drop it because it does not satisfy; if we watch him write the prophetic words, "You may give to men their bread, I would give to them their spiritual food;" and later on see him unhesitatingly lay aside his work to join the army of his nation, because he feels that he cannot teach patriotism to children unless he has himself stood the supreme test of patriotism by offering his life for his country—we shall see that he slowly came into the sublime ideal of the meaning of life. If we catch the contagion of his enthusiasm, and have communicated to us some touch of the divine consecration, which lifted him above poverty and misfortune and apparent failure, and kept him strong and cheery to the end, surely we shall stand ready to exclaim: "The first requisite of a great book is here; a deep, fervent life has been lived." Froebel was not simply the founder of a method of development for little children, but an educator who saw, from the beginning of life, its end and high destiny, and traced with clearness and logical connectedness the needs of its various stages — of infancy, childhood, and boyhood — with here and there sweeps far out into manhood, and the duties and responsibilities of parenthood. He explains the breadth of his thought in these words: "The whole of nature, up to the appearance of man; the whole of history, from the beginning of the human race through all the past up to the present moment, and still onward to the final consummation, stand before my soul, in one accurate representation of true education."

Our theme today is "Kindergarten Ideals." The *Mother-Play Songs* were written later in life than either of his other books, and were intended to illustrate, to mothers and teachers of young children, how to lead the young child, easily and naturally, into a consciousness of the "truths that sit sublime as directive power upon the throne of life; the truths of God, freedom, and immortality." In speaking of this book, Froebel said: "I have here laid down the fundamental ideals of my educational theory; whoever has grasped the pivot idea of this book understands at what I am aiming." The baroness Marenholtz von Bülow said of this book: "Notwithstanding the fact that the form of the book is capable of being improved (when its substance is really understood), it is not only new and important, but it is in the highest degree a production of genius. It reveals the process of development of the whole instinctive life of the child, and converts the intuitive, aimless action of mothers into an intelligent plan, in a way which has never before been interpreted." Dr. Richard Lange, in speaking of the book, says: "It is not a formal system of early lessons for children, but is a moral whole, held together by one pervading fundamental idea, and impressing wonderfully all who are open to its influences." Miss Elizabeth Peabody says: "This book stands unique in the world's literature."

I could quote from many other authorities who speak with equal enthusiasm and earnestness of the value of the book. Let us turn, rather, to the help which it gives to mothers and kindergartners, in solving their practical problems, in order that we may disabuse your minds of any unfair prejudices which may have arisen from a mistaken idea that it is the fine-spun theory of a German philosopher, or the beautiful dream of a poetic idealist, of very little use to the average American mother. The truth of the matter is that it is of more real value to the mother, with the everyday problems of the family upon her hands, than any book I have ever studied. It deals with incidents universal enough to have taken place in the life of any child, and which do occur in the lives of most children, and shows the full significance of the seemingly insignificant manifestations of the experiences of childhood. A glance thru a half dozen of its plays and songs will prove this to be the case; a child fresh from his morning bath is spontaneously tossing his limbs about; a mother is playfully teaching her child to sit alone; a group of children is testing the power of the wind by flying a kite, or running against it with a paper windmill; the baby is peering into its empty cup to see if all the bread and milk are gone; a child is testing a juicy plum or biting a sour apple; a mother is teaching her little one how to smell a rose by smelling it with him; a child is interested in the swinging of the pendulum of the clock; a baby is learning to play pat-a-cake with its little hands; some children are feeding the chickens ; a boy reaches his hands into the water to seize a fish that flashes below. These and like simple incidents are the text from which Froebel preaches to us some of the deepest and most profoundly spiritual sermons ever preached by prophet, priest, or sage.

Let us consider what the ideals are which are set forth by this book. First, what is Froebel's ideal of the development needed by the child himself? Second, what environment aids best in this development?

Third, what are the ideals presented, as to the child's relationship to the rest of mankind and to God?

In every consideration of the child's own development it is always with reference to his threefold nature; every song and game in the book is given as an illustration of how to develop simultaneously the body, the mind, and the spirit, as well as their relationship to each other. The body is to become a strong, free, and beautiful instrument of the soul. The right development of the body is shown to react upon the soul. Froebel shows how physical energy, put forth by the child in pushing away an obstacle to the free and joyous tossing of his limbs, awakens a corresponding consciousness of inner power; and again points out to us how the quiet folding of the baby's hands tends to produce an inner collectedness or unification which is the first step toward the comprehension of true knowledge, namely, the unity of all things in God. In the development of the child he would have simple and childlike words sung to soft, sweet music as an appeal to the intellect and the emotions. As an illustration of the practical manner in which he shows how this threefold development may be carried out, let us take his little song of "The Weather Vane"—almost any other song would serve as well. Here the child is taken by his mother on a windy day for a walk. He notices the moving weather vane, the swaying branches of the trees, and other objects which are in motion, and by the law which is as universal as it is wholesome he tries to understand the cause of the movement by experiencing the same in his own life; in other words, he begins to imitate the moving weather vane with his hand. Now comes the mother's part. Seeing that her child is trying to translate the meaning of the outside world by taking it into himself and putting it forth in his own baby fashion, she assists him by helping him to turn his hand bent to a horizontal position, now this way and now that, and accompanies the little play with the song, sweet and simple and suggestive, in that it connects the invisible power of the wind in the world about him with the invisible power of the will in the world within him. Simple as this play is, it not only awakens new physical and pleasurable activities of the body, and increases the accuracy of the child's powers of observation, but it leads him, also, to the reasoning concerning the cause of the manifestation he sees about him, and stirs within him the vague presentiment of the truth that all external objects and activities are the result of this invisible, intangible, not entirely uncomprehended, force, energy, or cause. In his commentary on this little play Froebel explains to the mother how, in the child's effort to understand the cause which moves the weather vane, he is reaching out after the cause which moves the universe. Thus he begins the most sublime inquiry which can occupy the human mind. Were there time, I could show you how each little game not only exercises some of the muscles and senses of the child's body, but aids in the development of his powers of observation, comparison, etc. No view of child nature short of this ever-present struggle to understand spirit and to manifest spirit is accepted for a moment by Froebel. He holds up always the one thought that human life is the divine life striving to manifest itself in concreted form; that, in this manifestation, body, mind, and spirit each has its place. Each must be understood and respected—aye, even reverenced—if the whole is to show forth the God-thought given to that particular human being to develop.

Let us now turn to the ideal environment held up by this apostle of childhood as the fittest and most wholesome surrounding for the unfolding of the power within, as well as the absorption of power from without. In almost every song in the book the mother is the child's companion, not simply that she may attend to his bodily needs and protect him from harm, but may aid his every effort at self-expression, as well as his every attempt to increase his knowledge of the outside world. Nay, more: she must so understand the spiritual meanings of these efforts that she will lead him past failure to successful expression of what is stirring within, to definite knowledge of what is reached for from without, realizing that all endeavor, all aspiration, is the voice of God calling to the human soul to overcome its present limits, to come up higher. If the mother could only once read this transcendently beautiful volume, her child's soul written by the hand of God Almighty himself, we should never again hear of the drudgery of baby tending, the narrowness of domestic life, the self-sacrifice of motherhood. The first would be transformed into the office of the high priest attending upon the shrine within the holy of holies. The second would be entrance upon a course of culture, of both intellectual and spiritual growth, the like of which no university in the world furnishes. The third would be the glad exchange of a life of trivial pleasures and nonessential occupations for the highest and holiest and most lasting joy that can come to the human soul. A noble woman once said to me: "I never make a sacrifice—I always weigh the alternatives and choose the higher. Surely that is no sacrifice." Could every mother look at motherhood in this way, she would soon see that she was merely giving up external, oftentimes unsatisfying, activities, that she might accept the deep, rich satisfaction of an inner life at one with the divine—of a coworker with God. I do not mean by this that unnecessary sacrifice of health or strength or time or intellectual growth or social pleasure is to be made; but, rather, that all these should be so understood and used that she may be the better and stronger for her great work. I know of no other book which will so uplift and inspire the mother's heart, until she is able to accept just this view of her calling, as does this *Mother-Play Book.*

The first essential, then, in the right unfolding of the child's nature is right motherhood. It leads her to feel that the vague stirrings of physical activity in the child are a "hint from heaven," given to her, that thru the outer life she may awaken and quicken the inner life. I might go on and on, thruout the songs of the entire book, and show in each some great underlying truth that makes all life glorious to the degree that it is understood and lived.

But we must hasten on to the second, scarcely less important, element in the ideal environment of child life. If consecrated and intelligent motherhood, thru the power of love, discerns and aids the growing soul in its unfolding, the constant contact with nature, in her free out-of-door aspect, leads this same soul into consciousness of the love and power and mystery of the divine mind by which it is surrounded. There are but three pictures in the *Mother-Play Book* from which the out-of-door world is shut out. The hills and streams, the earth and air and sky above, are made the child's silent teachers. The birdlings in the nest help him to comprehend the depth of family life; the flowers that grow in the garden become his messengers of love that overflows the meager boundary of words. The gleaming fish as it darts thru the water, the songful bird as it mounts in the air, stirs his own sense of joyous freedom. The ants that are busy in the ground below his feet and the stars that shine in the heavens above his head are his companions; "he knows no limitations that separate him from heaven." In his play with the light he learns, as did his race before him, the beauty and joy of the good. In the shadows he feels the nature and limitations of evil. Even the negative side of brute life, as shown in the pictures of "the wolf and the wild boar," gives him the repulsiveness of selfishness and greed, the responsibility of the higher orders of creation for the lower.

Let us turn now to the third set of ideals contained in these "Nursery Songs." All education has, or should have, a twofold aim; not only is the end, the individuality of the child, to be considered, and as favorable conditions as possible established for its right development, but he has also to be trained to realize that he is part of the human race, and has advantages and privileges, duties and responsibilities, which arise from his relationship to the rest of mankind. To the degree in which this side of his education has been attended to does he grow into a conscientious parent, an honest workman, a loyal citizen, and a broad-minded lover of humanity. This as well as other training must begin with the child's first consciousness of his relationship to others, else it is never complete.

I know of no more charming or surer indication of inner wholesomeness than that of the child who fears no stranger, but meets each newcomer as his friend. In order that this happy condition may be maintained, it is necessary that the ideals of right family life, of the true significance of labor, of the only just basis of the world of commerce and trade, of the noble self-sacrifice of true citizenship, of the breadth and depth and sublime beauty of the true church invisible, shall be laid before him. Almost all of the crime and degradation of soul which is in the world today comes because the right ideals of these relationships have not been understood; or, if understood, they have not become such an integral part of life that the pain of violating them outweighs the supposed gratification or pleasure which is to be gained by this violation. I have seen almost every face in a mother's class become luminous as lesson after lesson in this book has revealed to their inner eye the deeper meaning of the joyous play in which the baby's limbs are taught

> To stamp the flaxseed out at length,
> To make the oil so clear and bright
> That feeds the pretty lamp all night—

his part in the great drama of protecting and being protected, the comprehension of which harmonizes all differentiation in powers, sanctifies all labor, purifies all love, and explains at last to the struggling soul its relationship to the divine. I have watched their minds expand and their lives broaden as they discussed the far-reaching meaning of the childish song of "Grass Mowing," in which the baby learns to thank the man for his mowing, the maid for her milking, the cook for her baking, and mamma for her serving of his supper of bread and milk, "so no thanks forgotten are."

"The Charcoal Burner," "The Carpenter," "The Joiner," "The Wheelwright," each and all open doors into the great trade world by which the child is surrounded and shown, beyond the material prosperity presented in their foreground, a background where are seen the eternal foundations of all laws of sociology which bind human activity into one whole. I firmly believe that, when these songs are rightly understood by parents, so that they will become a part of the child's being, a large amount of the present struggle between capital and labor will be done away with. In the two songs of "The Toyman and the Maiden" and "The Toyman and the Boy" are given to us, not only the motives which govern an expenditure of money, but also hints and suggestions of that deeper lesson of choice, the right or wrong learning of which means victory or ruin to many lives. The value of service, the dignity of labor, the need of skill, the power of industry, are all shown in their true light, until the young mind learns to scorn idleness and uselessness, and the childish heart longs to add its name to the list of the world's workers. No wonder Froebel looked prophetically toward America as the future center of the ideal education. Here, and here alone, amid all the nations, is an idle class looked down upon, and the privileged class is the class which earns its privileges.

I can but briefly touch upon the ideal set forth in this remarkable book as to the deepest and most profound of all relationships — that of the human soul with the divine source of its being. For, after all, no matter what our external activities or achievements may have been, or what prodigious growth our human relationships may have attained, when the great, deep crises of life come, be they of joy or of sorrow, each human soul stands in its inmost chamber—alone with God. Hence the most vital of all questions is the one: "How shall we so train the child that he shall rise into a clear consciousness of his oneness with God?"

CHILDREN'S GARDENS

BY DR. JENNY B. MERRILL, NEW YORK CITY

Great efforts have been made by kindergartners all over the country to bring natural objects into the kindergarten. The children play with sand, shells, and pebbles, making miniature seabeaches, farms, and gardens. They sort seeds and design with them; they outline with twigs; they mount flowers and leaves. There are often pet animals to be found in the kindergarten. The children treasure the cocoon all winter, and are wild with joy when nature's real fairy story "comes true" in the spring. The aquarium, with its dainty fishes darting "now here, now there," with its tadpoles and polliwogs, its snails and lizards, is a daily pleasure to many kindergarten children. Potted plants and window boxes are everywhere to be seen, and since our Cornell Agricultural College has entered the field, we are beginning in New York to look for what we call the eggshell farm. The kindergartner who cannot say, "Every one of my children has planted a seed, watered it, and watched it grow," is becoming hard to find.

Yet some of us are not satisfied, for we know that the best of nature cannot be brought indoors. The wise kindergartner longs, not only to bring nature to the child, but far more to take the child to nature. The bee on the flower in the garden, the bird flying up to the clouds, the rustle in the treetops, the shadows on the grass, the blue sky, the sun, the moon, the stars—these cannot be brought into the kindergarten; we must take the children to them. Hence the city kindergartner walks out with her little flock into the public parks. I am happy to report that there is scarcely a public park in New York city that has not been visited in this way by our kindergartners; and this is doubtless true elsewhere.

To take the child to nature was originally the strongest feature of the kindergarten. Every child was to have a garden. Froebel laid great stress upon this; he recognized the child's instinct for digging in the soil, as he watched him "making a little garden under the hedge near the fence of his father's garden."

Someone has said: "Kindergartners want the earth." Yes, that is just what will content us, and the children too—a small patch of Mother

Earth, where each child may have his own little garden bed; where he may raise a few flowers and a few vegetables; where he may handle a spade, a rake, and a hoe; where he may delight, if possible, in a watering-pot, a trowel, a wheelbarrow; where he may dig and plant; where he may watch and wait and reap. It is not only figuratively, but literally, that kindergartners "want the earth."

The purpose of this paper is simply to renew an interest in children's gardens, and to cause every kindergartner and every mother to question whether she has done all in her power to secure a small piece of ground for cultivation. When this proves impossible, then, and not till then, let us content ourselves with flowerpots and boxes indoors.

By way of encouragement, I have secured a number of interesting letters that tell of efforts being made, even in our largest cities, to have at least a few out-of-door gardens. St. Louis, Philadelphia, Chicago, and Boston have responded, and also several smaller cities in New York state, where the work of the Agricultural College of Cornell University is beginning to bear fruit. While I cannot now take time to describe this work at Cornell, I cannot refrain from noting that during the past year ten thousand strawberry plants have been distributed to the children who applied for them, over one thousand coming to New York city.

One of the most interesting and encouraging letters is from a kindergartner in St. Louis, who, with the help of eighty pairs of little hands, transformed an old brick-paved yard, 12 × 24 feet, into a "real live flower garden." This yard had been a playground for many years in the lower part of the city, where little children came from crowded tenements. The children loosened and removed the bricks, afterward using the same as boundaries. They made the beds, transplanted vines from the kindergarten room, planted seeds, trained vines, and took turns in watering the garden.

The kindergartner writes: "There were times when the earth was loosened with tiny spades and shovels, more often with little fingers; times when walks were swept, and, best of all, an occasional day when a wee bit of a paper basket was folded, and we all went out to fill it with a pansy and a daisy, and perhaps a baby rose, and to carry it with joyous love to our principal, a woman of rare sympathy and power.

"We all decided together just which flowers to cut, and never was a flower taken from the garden without our mutual consent, although no one was forbidden to touch, and the gate stood open into the playground of about eight hundred children, many of whom often stood at the gate and enjoyed the garden, but never intruded. Sometimes whole classes were invited in; sometimes a big brother or sister. There were many bright mornings when all the little chairs were carried out into the garden, and the morning song sung there. Stories were told, too, while we sat among the flowers, with the fleecy white clouds floating above our heads."

Miss Williams, supervisor of Philadelphia public kindergartens, reports twenty out-of-door gardens. This is the best record I have received. She tells a touching story of one little boy who was so impressed with the one hill of corn raised in the garden that he said: "God is a better man than I used to think he was, because he made it grow."

Another Philadelphia boy became so interested in gardening that he filled a tin mustard box from an ash heap, the only semblance of Mother Earth to which he had access, planted a pea, and kept all in his pocket, lest in his absence it should be thrown out.

One Philadelphia kindergartner tells her whole story on a postal card, as follows: "We have a small patch of ground in the schoolyard where the children have planted seeds, both flower and vegetable; also a few plants, and one or two vines. The children delight in taking spade, shovel, rake, and hoe on fine days, and in watering their garden. We have also three flourishing trees planted on as many Arbor Days. We frequently have our kindergarten games in the garden. The children seem to revel in the open air."

A St. Louis kindergartner writes of lunch parties where lettuce and radishes were served from "our garden."

From Miss Alexander, supervisor of Chicago public kindergartens, we learn of a kindergarten where the children stored beets, potatoes, beans, and corn for Thanksgiving, in a cellar walled with bricks of their own molding — quite an interesting lesson in correlation. "Not a large crop," she writes, "but all their own, and quite enough to fill their tiny storehouse." Miss Alexander also writes that patches of ground are being offered to suburban kindergartens in Chicago, and she takes it as a good omen that garden tools are becoming a part of kindergarten supplies — a suggestion which I hope will not be lost.

We find several additional suggestions in a letter from Boston. The kindergartner writes of raising, among other garden vegetables, a squash, and speaks also of an abundant sunflower crop, which gave opportunity for an exercise in seed gathering in the autumn. We will remember the sunflower.

Miss Poulsson writes of her interest in this subject, and adds that the city gardener of Boston fills any school window boxes that are brought to him, if they have holes bored in the bottom.

Mr. Clapp's article on school gardens, in the *Popular Science Monthly*, last fall, shows what valuable work is being carried on in Boston. I hope all kindergartners will read it, if they have not done so.

I have two more letters of special interest, from which I shall quote in closing.

You are all aware that the baroness von Bülow traveled extensively thru the United States last year, visiting the kindergartens in both small and large towns. Upon her return to New York she told me that she had been surprised to see how few out-of-door gardens were connected with kindergartens, even where to her there seemed abundant opportunity to secure ground. In a letter recently received she says: "In Dresden we have many little gardens; we do not think a kindergarten a real one without at least a small piece of ground where the children can have their little beds." She describes Froebel's ideal kindergarten, with a flower and vegetable bed for each individual child, and one large bed belonging to all. She speaks of Froebel's suggestion that the children make gifts from their own beds, and enjoy together the product of their mutual bed.

The baroness offers several practical suggestions in her letter. She speaks of having the children make the paths of gravel, with borders of shells for decoration; of having the seeds gathered, dried, and put away in packages by the children for future use; also of having bulbs cared for in winter. In regard to having trouble with bad older boys, she says that, by calling upon them for help, they have become guardians of the tiny beds.

Mrs. Maria Kraus-Boelté also writes of her experiences in England, Germany, and America, where she has had the ideal gardens of Froebel. In a small yard back of her house, in New York city, the children raised radishes, peas, beans, salad, water-cress, mustard seed, cucumbers, wheat, rye, potatoes, etc, each child choosing his own seeds. In the flower beds were pansies, pinks, phlox, mignonette, hyacinths, tulips, lilies-of-the-valley, etc. Mrs. Kraus also speaks of the children's insect studies in the gardens—of watching the spiders, worms, ants, caterpillars, butterflies, bees, etc., and noting their habits in their garden home.

At a meeting of kindergartners at Clark University, two years ago this summer, kindergartners were advised to develop the out-of-door occupations of the kindergarten. In following this wholesome advice, shall we not be enabled to help in solving the problem of freer and larger movements, while still following Froebel most faithfully?

We recognize how impossible is the ideal garden for many city kindergartners, but we are convinced, from the letters quoted, that much more can be done thruout the country at large. In some instances may not a plat of ground, a little distance from the school, be secured? Are there not mothers living near some of our kindergartens who will open their yards to a kindergarten, or to the neighborhood children? Have not too many of us contentedly settled down to develop indoor kindergarten occupations? Possibly we have spent too much time in determining the sizes of needles and blocks, and in learning intricate folding. These things ought we to have done, and not to have left the other undone.

There is a story told of a little boy who, on being taken to a kindergarten, was disappointed. "Why," said the little fellow, "it isn't a garden at all." Let us pledge ourselves, wherever possible, to remove this reproach during the coming year.

A CHILD'S SONG

BY MISS MARI RUEF HOFER, CHICAGO, ILL.

Paying tribute to the enormous educational undertaking of the kindergartner, Kate Douglas Wiggin has said that in order to be a good kindergartner one must have the music of a St. Cecilia, the art of a Raphael, the wisdom of Solomon, the patience of Job, and the eloquence of Pericles.

Added to this, someone has facetiously remarked that the woman who accomplishes such a metamorphosis of herself here in this mortal state will have to have a special heaven provided for her where she may pursue her celestial career unhindered by the slower progress of less favored sisters.

One morning in kindergarten is sufficient to convince the most skeptical of the varied efficacy of music in meeting the educational demand. From the soothing of the savage breasts of the little obstreperous newcomers, who are testing the much-vaunted principles of the kindergarten to the full extent, to the last bow and nod of happy heads as they disappear around the door panel at noon, its harmonizing usefulness remains an unceasing miracle of delight. Here, in a kingdom ruled by love, sweet music stands enthroned, the magician of the kindergarten, evoking by sweet tones the spirit of good-will, arousing the weak to chivalry, soothing refractory nerves and wills to good behavior; coaxing, ordering, vitalizing, relaxing, "it cheers, it warms, it comforts, and commands."

A glimpse into the morning circle shows us the varied application of song: First a gentle hymn or verse — a quiet moment altogether for spiritual recognition with which to start the unwinding of the skein of the day free from snarls and tangles. Next, like true children of the light, we turn our faces to the sun and invoke its blessing; then, with a good morning to everybody and everything, little doors begin to open and little inquiries and ideas to peep out. Here in a few short hours is run the gamut of human experience chronicled in song. Everything he thinks and feels and sees the child sings about. Our musical material ranges from a "Mother Goose" melody to a church choral, interpolated by thrilling experiences of "Johnnie's Kitten" with a white tail, the latest news of baby sister come to Bessie, to Jimmie's excited information that "our Bob" has gone to the war. All this must be poetically and artistically met by the versatile kindergartner and harmoniously made to fit together like snug little beads on a string. A good child's song is not a thing of a moment, but the essence of an idea evolved from the experience of the ages.

Adequately to "sketch in" one of these first musical experiences requires the best skill and tact of the good kindergartner. First to prompt expression, then to seize the proper moment of interest when the little singing lesson can be applied, when we can develop better and sweeter voices, or help a little grumbling monotone on to his musical feet—all this requires art.

To make Johnnie's eyes sparkle and little Mary's heart run over with joy is the first practical use of the kindergarten song. It must give a great deal of pleasure first, and then it may instruct a little afterward. Some of our kindergarten songs err on the side of weight and seriousness. Buoyancy, spontaneity, simplicity, and sincerity are all-around art tests. A child's song should not theorize or promulgate doctrines. Whether it is absolutely necessary that the ultimate truth be stated in a child's song or not is a question; of one thing we are certain—that it must interest, thru its beauty and spirit of freedom, or it marks a lost opportunity.

A child absorbs a song like air and sunlight, he rejoices in it as in a natural element. It appeals to him from the outside, and tells him what he already knows, but what he has not quite formulated for himself. In a song he sees himself in perspective. Thru music he enters into his imaginary inheritances, where he builds castles and revels in the possessions of that which is going to be.

We are glad to say that the kindergarten song has graduated from its position of mere expediency into a carefully conceived work of art, tho this be only four lines long. From a mere jingle it has risen to the dignity of a composition, and, tho miniature in its proportions, it is often made to embody the art principles of a Wagnerian drama.

It is difficult, indeed, for the adult who was brought up in a songless atmosphere to regain this lost inheritance. How great the crown of reward to her who, in the later days of fixed habits and unresponsive organism, undertakes the gigantic task of becoming a singer!

The ideals of the kindergarten song lie absolutely in the hands of the kindergartner. It can rise no higher than its source in her mind, no matter how spontaneous and beautiful it may originally be. Whether future Mozarts and Beethovens will result from our work depends upon our taste and our discrimination—our touch of the piano, our vocal interpretations. This we know, where great musical genius results, the ideals of tone and rhythm and content must be early inculcated and fostered. Art is at our command, plenty of it and the best of it. Let us seek to bring this to the children reverently, treading softly in the presence of the slumbering powers of the child. To relegate music to mere mechanical utilitarianism in the kindergarten is sinful and desecrating to both music and child. To make him an active participator in its beauties, and to let him help create its standards even in these early days, will make him a better, nobler man and factor in the world's work.

This paper was followed by the singing of four little couplets and the following lullaby :

Rock-a-bye baby upon the treetop,
Mother his blanket is spinning,
And a light little rustle that never will stop,
Breezes and boughs are beginning.

Rock-a-bye, Rock-a-bye, baby,
Swinging so high, Rock-a-bye,
Rock-a-bye, Rock-a-bye, Rock-a-bye,
Rock-a-bye, Rock-a-bye, Rock-a-bye.

When the wind blows, then the cradle will rock,
Hush ! now it stirs in the bushes,
Now, with a whisper, a flutter of talk,
Baby and hammock it pushes.
Rock-a-bye, etc.

Weave him a beautiful dream, little breeze ;
Little leaves, nestle around him.
He will remember the song of the trees,
When time with silver has crowned him.
Rock-a-bye, etc.

IDEAL PLAY IN THE KINDERGARTEN

BY MISS SUSAN PLESSNER POLLOCK, WASHINGTON, D. C.

" He who helps a child helps humanity with a distinctness, with an immediateness, which no other help, given in any other stage of human life, can possibly give again."

What is play ? Let us go to the child to find out. Froebel went to the child to learn. Christ told us : " Except ye become as one of these little ones, ye cannot enter the kingdom of heaven." Why did our Savior give us a child as our type ? Because of the child's simplicity of nature. He is natural, not artificial. First, then, a child does not require, or allow, artificial conditions when he plays. He is natural himself, and he wants everybody else to be. If, therefore, you wish to join him in his play, be a child with him, or step aside and let him play with his fellows and mates ; do not " spoil the fun " by being a discordant element. Ah ! then fun is a necessary element in play, is it ? What proof have we of this ? The child himself. Watch a crowd of little people gathered expectantly together for a soap-bubble party. I hear someone exclaim :

"Do they ever play soap bubbles in the kindergarten?" Certainly, comrades, do we not? Is the soap bubble not the most perfect representation of the sphere, adding to the joy of its perfection of form the perfection of prismatic beauty in its coloring, and, best of all, an act of creation on the child's part, at least an act of will and action on his part? And when we have will and act combined, we have all the force of creativeness, Froebel's highest instinct in his ladder of seven. Hear the cries of joy and happiness as one fairy ball after the other rises and floats! It has even been thought worth while to write a sweet song about the soap bubble, which the children love to sing: "See the Fairy Castle Rise." You will find it in the *Young Folk's Opera*. In this case we play the game and sing a song to suit it; let us see if this is following nature. The child rocks a doll and sings a lullaby. Does he sing a lullaby and look around for a doll? He plays steam car, and sings "choo-choo," and whistles and toots. Does he sing "choo-choo" and look for a steam car? Sometimes he does; he feels a melody, his instinct of rhythm is asserting itself, he expresses it as best he may — in musical sounds or otherwise — perhaps by pounding, calling himself meanwhile a carpenter. We have charming songs to give him for this, when he feels their need. Take Kate Douglas Wiggin's "Builders" in her *Chimes*, and numberless others. He begins to take an interest in the workman and his work; we accept it as an awakening, and lead him on to appreciate and respect the artisan and his art, wherever found, however expressed, and we have the trade games. Or he stamps and neighs and whinnies and calls himself a pony. The kindergartner sings:

"Hop, hop, hop, go and never stop,
Do not scold and do not grumble,
Do not stop and do not stumble,
Go and never stop, hop, hop, hop."

This needs modifying — not "go and never stop," but not stop until the right time, when the work is done. A moral then! Yes, why not? Life consists of opposites, action and rest, cause and effect. One of the prettiest plays I have seen I saw in Louisville, where, in a charity class of some one hundred little ones, accordingly as the child was able to show perfect self-control or absolute relaxation, expressing rest, he was chosen, or allowed, to be a pony, and express his impersonation in wildest exuberance of action. Sometimes one pony ran at a time, sometimes a dozen were galloping and prancing about. "Children have too little education in true liberty." Continue from the child's own standpoint the thought of the pony; let the pony live on a farm; think of what a field this opens for investigation, for study, for representation. "The secret of memory is interest. What children are deeply interested in they never forget" (Locke). What avenues of suggestion from nature! Let me add that in Clara Louise Anderson's "Characteristic Instrumental Rhythm"

—rhythms which may be capable of very beautiful interpretation, as bee, bird, flower, wind, or water is impersonated — great care is needed that the action be not mechanical, and far beyond the child's comprehension or interest, as he imitates the movements of his teacher as she rises and falls and sinks and floats in obedience to the music. "The river makes its own shore, and each legitimate idea makes its own channels and welcome," Emerson says. A most stubborn, wild, headstrong little boy, who screamed and fought everything around him for eight or ten days after having been brought to the kindergarten, one day surprised everybody in the midst of a play of "The Miller." We were singing, "Here's some corn, sir, for your grinding," when Earl burst into the ring, saying, "You don't do that right. This is the way to be a wheel," and flew into the ring from his point of observation and rushed wildly around and around in ever-widening circles, as the ring spontaneously opened wider and wider for his accommodation. He was allowed to be a wheel, without interference from the kindergartner, until the pent-up energy, which had hitherto vented itself in screaming and kicking, became "the joy of living" which accomplishes all things, and he was henceforth one of us, and continued to be for five years, when he left us to go to a boys' academy, where he made an excellent record.

Children are much nearer the truth than we, for their instinct is to give themselves up to full, vigorous activity. Froebel tells us the first instinct on which his system is based is the "instinct of activity." "Activity means growth, be it of body, or mind, or spirit." "Anything done is a training," for better or for worse, for good or for evil. We are told we possess over four hundred muscles; allow these muscles to expand, and great blood pressure ensues, thus insuring good circulation; if we all possessed good circulation of the blood, we should, none of us, be sick. It is because of the too great rush of blood to the brain, the imperfect circulation — from every cause, beginning with mind and ending with matter — that our little ones, who have been frightened or scolded, or are hungry or cold or sick, are called "naughty." Bring them to the kindergarten and let them play. Play with them; how quickly smiles chase tears away, little hands and feet get warm, cheeks get pink, eyes shine, while merry laughter is so infectious that visitors and children are sympathetically one, and sorrow and care are forgotten by all, as the little feet trip to the measures of a march or dance. What, dance! Yes, for what is rhythmic movement but dancing, be it called physical culture, Delsarte movements, or the various steps of a waltz or polka, as we sing:

> "Let the children come, as we form our ring;
> Every footstep light and free;
> All the faces bright, every footstep light;
> Let us clap our hands and sing."

I refer you to a *History of Dancing*, by Gaston Vuillier, published by Appleton, where its history is traced from its dawn in Egypt, thruout all its developments in the sacred dances of the Hebrews, the Greeks, the Romans, and the early Christians, to the gradual decline of religious feeling in this form of art, and the debasement of the poetry of motion to the level of licentious pantomime. Then you would encourage dancing and dramatic impersonation? Yes, rightfully expressed, as rhythmic movement and natural expression, without distinction of sex, simply by children as children, not as so many girls and so many boys, so-called partners and beaux—ideas wholly foreign to Froebel's philosophy. It is a ring play, where, for action's sake only, for mere suppleness and grace, one child stands in the center, while all sing, "Let us look at Mary, who shows us the game; let us look at Mary, and we will all do the same," while all carry out, in turn, each child's pantomimic act, raising the arms over the head and swaying as the wind blows the waving grain, turning the hands rapidly in rotating motion to represent a wheel, sifting flour, beating eggs, rowing, swimming, etc. In turn, we said: is Mary therefore told to choose a boy to take her place? Oh, no, she is told to choose a playmate; boy or girl is immaterial, and no one gives a passing thought to it, whether it is a boy or girl whom she chooses. There is no sex in the kindergarten any more than there is in the home. Is one not taught to be courteous and chivalric, then? One is decidedly taught the golden rule, which does not say, "Do unto boys and girls," but "Do unto others." Is anything done in the kindergarten for mere action's sake? Nothing. Then, when one little one stands in the center of the ring to be an example to his comrades, be it simply by an act of volition or action, it requires great bravery and moral courage on the part of a timid child or a self-conscious one. We have known a case of a little waif, one of a large family, who lived with his drunken parents in a cellar, who was two years in a kindergarten of Baltimore before he had sufficient command of himself, or could so far forget himself, as to take this part; but in this case he proved that "the fact of struggle carries with it the possibility of victory," for poor little Sammy was never the same boy after that act. He walked erectly, more definitely. We heard from Miss Lucy Moten in an address, a short time since: "The man of the present age who would have success must have courage, pluck." This, then, was a beginning for Sammy; who shall foretell its ending, and what shall be said of the patience and love of that kindergarten mother, Mrs. S. L. Welsh, who was Baltimore's first inspiration in ideal kindergarten work? May I close with a few words from Miss Alice Fitts and Mrs. Theodore Birney, given to us at our last mothers' congress? "A teacher learns to adjust her own life through teaching the little ones." It makes life worth living to take natural methods and order them scientifically, it helps the something within to come out and learn, to come in touch with life, to educate, to study children, to meet mothers, and be in touch, as we are on the present occasion, with all educators. Mrs. Birney says: "We cannot make our own ancestors, but we can endeavor to make over ourselves." My paper is necessarily one of suggestion rather than dictation, and there are many points which have, of necessity, been omitted, but if we are the heart-mother to the child the kindergartner is meant to be, we shall study the child's best good, not for present enjoyment only, but for the future good of this life and the next.

THE DEVELOPMENT OF THE INNER LIFE OF THE CHILD

BY MRS. MARIA KRAUS-BOELTÉ, NEW YORK CITY

Improved infant education commences on a natural, i. e., logical basis—ideas being abstracted from perceptions—becoming thus the product of the individual's own mental activity, developing originality, instead of becoming "blind consent" to the ideas of others.

Clearness of mind is needed, in order to reflect on the intelligent productions of thought and work of others, in order to appropriate them individually. The foundation for this should be laid during the first years of the child's life.

The same law of nature manifests itself in all organisms, "undergoing a certain series of changes," leading, according to the characteristic of the organism, to like ends, i. e., producing "like form."

Man alone is endowed with a free will—to accept, to reject, to improve and ascend, or to disregard and lower himself. This capacity is found in the race and in the individual; without it education would have no basis. Its aim is "self-knowledge," and it is aimed at with more or less success.

The characteristics of mankind are reflected in the play of children. At first instinctive life is predominant in the young child. Education "steps in" to modify, to moderate, to exercise, to guide and assist, to lead "by example," showing that "will-power has a higher aim than individual well-being alone;" leading the child to become conscious of the highest expressions of the human being as an individual by acquiring "self-reliance, independence, and freedom;" letting him perceive that love, not only in the narrow circle of a few, should hold him, but that his love should grow strong within him to extend to mankind, thus reaching up to the love of God. As in the "form world" of God's creations, so also in the mental development, "a natural series of events" must take place in order to reach the corresponding idea of the mind.

For this end certain means are to be given, by which not only to prepare and accustom the mind to logical thinking, but to assist equally the natural functions of the soul correspondingly from without, doing away with "mere educational instinct."

In order surely to reach the aim, the child should be given "free choice," within certain limitations. The child giving his attention to actions performed, or objects formed, evinces the pleasure of "doing for himself." His native curiosity will become a great factor in the proposed, intelligently guided play, or play-work.

Whether instinctive manifestations or natural impulses, serving for the development of all creatures, the natural development in the child is to be aided by supplying, from the earliest period, external conditions favorable to healthy growth. Thus, for instance: "Nursery songs Froebel would not have less natural and fond, but wisely turned into a means of strengthening the yet weak limbs, and equally healthfully feeding the receptive mind." "First impressions on the mind Froebel would give by a few typical objects marking contrasts, yet harmonizing in combination. The mind, receiving clear impressions, will later on develop them into clear conceptions by reproducing them in intelligent acts."

All of Froebel's education means are based on this; and the child, as he investigates or originates a form or figure, merely by slight but orderly changes in the material given him learns that "in forms of use, beauty, or knowledge, the symmetry of the whole always depends upon the exact arrangement of the parts." The child is not expected to comprehend this, nor is he even told of it as "an abstract law."

All science is based on experimental knowledge. The child's knowledge is experimental.

In dealing with the fundamental forms of nature, and constantly (tho unconsciously) using the fundamental law by way of arrangement, classification, and combination, these become "life elements," and thus a broad foundation is being laid for liberal culture. There is the harmonious blending of play and work, of freedom and order, of individual rights and social duties, aiming to impress on the child's mind the general properties of things, rather than varieties of form, always dealing with it in the most elementary manner, thus standing out as "archetypes of ideas."

Our thoughts may rise to the "loftiest heights"—their roots are ever found in the material world.

The "point" and "aim" are: that the proposed play materials and work, the games, songs, stories, sand, and garden work, or whatever may be used, should be regarded as means only to reach the child, so as to influence his character, his morals, his mind, heart, intellect—the child entire. The child's natural free development makes itself known in an activity of his senses, limbs, and body—the strengthening and the development of which lead to their uses: "from the impression to the perception of things; from the perception to observation and contemplation; from acquaintance with individuality and knowledge thereof to a recognition of mutuality; from the healthy life of the body, senses, and limbs to the healthy life of the mind; from action, united with thought, to the pure thought; from healthy, strong sensation to the thinking mind; from the outer conception to the inner comprehension; from the outward grouping to the inward comparison and judgment, thus rising to the development and cultivation of the intellect; from the outward apprehension of phenomena to the inner examination of their foundation and cause, to the development and cultivation of the 'life-grasping' reason."

The clear image of the individuality of each nature will appear to the child at a later period, in furtherance of the education of his mind and soul; and finally he will grasp the idea: first himself, and then the whole of which he is a part, being thus led from the thing to the picture, from the picture to the symbol — taking hold of the nature of a thing as a spiritual whole.

This is the development of the ideas of individuality and wholeness as conceived by Froebel — life becoming the revelation of the unity of nature and mankind, which means "oneness of God." "A little child shall lead them" is as true today as it has been and ever will be.

The child, as a bud on the "everlasting tree of life," must, like the first cause of existence, shape his being "out of himself" by creative activity; and he must be so guided "that the bud may throw out roots which will strike into the everlasting life," and that, "in the fruit of his doing and living, the divine and human may appear again in unity, i. e., that actions may spring from his inner being to the honor of God and the use and advantage of man."

Play, thus rightly understood, proves itself a means of assisting the inner growth of the child, independent of formal instruction. Self-seeing, self-hearing, self-making, self-experience, self-thinking — these are the activities of the child, and, rightly developed, they are associated with happiness, gayety, and joyousness.

The child gradually acquires a number of intuitions, without any so-called "intuition instruction." As he develops during the first seven years of his life, he learns to count and join numbers, but has no arithmetic lessons; he exercises the language of his country, and yet has no instruction whatever in language. Without singing lessons, he learns to sing; without geometry, he gains a knowledge of points, lines, surfaces, bodies, angles, etc.; without instruction in natural history, he learns something of flowers, plants, trees, insects, birds, animals, stones, etc., keeping all within limitations. His religious feelings are incited, without receiving any instruction in religion. No certain branches of science are discerned, as regards these young children.

All knowledge conjointly should be "as one great subject," without separation, open to the little ones on all sides, that they may "reach out," in order to assimilate, take in, "according to their need," as does the plant.

The educational help given should consist merely in assistance, or rather in supplying "food," as, for instance, for the sense of form, while, if the child were to evince the need for it, the sense of number may be nurtured in the next moment. Like the bee that flies from flower to flower, seeking food and finding it, so the child roves, so to speak, thru different realms of science, passing some by without paying any attention, reaching out to others with perfect ease, in order to derive the necessary mental food.

While the school tries to hold the attention of its pupils for a given time in one or another certain branch of the field of knowledge, thus "holding on" to one power, giving this a prevalent direction before all others, in order to raise the same in particular, the little child is left free, drawing equally alternately on all the mental powers, charging none too heavily, nor for too long a time. To follow one thought or merely one idea during an entire morning, week, or month would seem contrary to "child nature" and the laws of the child's natural inner development. Each new effort of the child is followed by "recreation" in inciting a new power by passing over a new subject.

In nature and in social life we find that, within a short space of time, ever new and varied elements are met with, following each other in quick succession, being subjected and, as it were, accidentally intermixed and "offered for absorption." Similarly education should deal with children under seven years of age.

The element of free development should ever be predominant, as are the plants in nature's garden. Care should, however, be taken that such "free development" does not diverge, and become degraded to arbitrariness and mere "toying." The child's free agency should be sacredly respected, while cherishing self-activity by sympathy, leading him unobservedly by moral sentiment and reasonable thought.

"All the conditions for æsthetic activity should first be given, then free will, subject to intelligent motive, should be addressed, directing the same to proximate ends through artistic and useful work or generous social action."

It is thought that each human being born into this world has an impress peculiar to himself, constituting his individuality. By education this may be modified or developed, but not essentially changed. The object is "the realization of a faithful, pure, inviolate, and hence holy life." A quantity of meaning rests in these few words.

A child is a perpetually changing, growing, yet potentially complete, human being, and stages of life, such as infancy, childhood, youth, manhood, etc., should not be so severed as to become unrelated. Each of these periods has a "culminating point" of relative completeness and beauty of its own. The more fully each stage is developed, the stronger will be each succeeding period of life. By gentle, gradual steps, thru the crudest and simplest modes of sensual perception, to the manifestation of divine beauty in art, and of divine truth in the Word, has God led the children of humanity.

In the play of children of all times and nations we see the nature of mankind experienced. As birds build nests, so children in their play build houses or dig holes. As chickens scratch up the earth, so do little children's hands, until in their little gardens they have learned in play "how to till the soil, sow, and reap." Any chance-found material will serve for plastic forming, be it only moist sand. There is no art which is not attempted by children, be it "pictures in chalk or pencil," or lines drawn in the sand. The first cooing tones of the infant move rhythmically; later the voices of animals are imitated, until true musical sounds issue from the little throats. And with the rudiments of industry and art the first germs of science show themselves also in the desire "to know." With the often repeated Why, How, and Wherefore the young mind strives to get to the bottom of things, to the fundamental truth, to their source in God.

It is a fundamental necessity that the development of the individual should go thru the same phases as that of the race, for both have the same end before them.

"Joy, peace, and freedom," as Froebel expresses it, "are sought by mankind; these can only be reached through the fulfillment of man's destination, which is the full development of the entire human nature."

At the beginning of his existence the child of nature rules in "man" as instinctive life, as an impulse which awakens the will at first only as an ungoverned force of nature. Self-preservation is almost exclusively the unconscious object of all childish utterances. Education moderates this instinct, and by exercise of his capacity for "loving" the child is guided out of the narrow range of personal life into that of the child of humanity, i. e., the social being who constitutes a member of human society; and here feeling and reason will guide the will power, lifting to a higher aim than "mere personal well-being."

Self-reliance, independence, and freedom are the highest stamp of the child of humanity as an individual. Almost all progress in the world is the result of that feeling of independence, "to create for himself an independent existence, a respected position in society." So long, however, as man considers only himself, or even the wider "self" of his family, so long "the child of God" still slumbers within him. Love must drive him forth into the larger community of the nation and the race, in order to devote himself for the benefit of the whole, and thus, by entering the service of mankind, he has entered the service of God, has become a "child of God" in simplicity and piety.

It is well known how detrimental premature schooling is to the sound development of body and mind; how it destroys all freshness and pleasure of learning. Up to the seventh year the child should not be so much instructed, but, instead, his faculties and intelligence be developed by activity and observation in favorable surroundings.

The point is to guide and influence the child to see correctly, to listen intelligently, to acquire correct notions, to be interested in everything that surrounds him; he should be observant, able to express himself clearly, to develop his inventive and constructive faculties; habits of order and cleanliness should be inculcated, a taste for labor and love of goodness should be acquired, for they form the basis of æsthetic and moral education.

It is not the value as knowledge, but the faculty to observe, to think, to express one's ideas. It is the harmonious development and cultivation of all the intellectual and bodily powers of the child, leading him to become conscious of those powers and to make use of them. And by intercourse with children of his own age he learns to become happy, sociable, and peaceable. Intercourse with others of the same age, under supervision of intelligent and sympathetic adults, who render help at the right time and at the right point for the development of the child's nature, is necessary.

It is formation instead of reformation; prevention instead of cure.

The human energies need to be utilized, inducing activity instead of restraint. Sedulous attention should be paid to the effect of employment on children of different temperaments.

"The fall from childhood's paradise begins painfully early in these modern times." "By forcing the child out of his unconsciousness, by demanding of him reflection, by checking the joy of his receptiveness, by too much teaching, we spoil the divine teaching of God and nature," says Froebel. "Let the child remain for a time ignorant of himself, live naturally, and drink in his wisdom and his religion from the influences which God makes play around him." "Make the bridge from the cradle to manhood just as long as you can, leaving the child a child as long as possible, not forcing him into premature development by intelligence or by anything else. Let him be a child and not a little ape or a man running about the town."

Ratich, Francke, Locke, Basedow, Pestalozzi, and Froebel based their systems of education on the principle of observation by the senses; the latter introducing into his method the spirit of self-activity.

"A good and proper beginning implies the end," says Diesterweg, one of the most distinguished educational writers and teachers in

Germany of the present century, who regarded the principle of self-activity in the service of the true, the beautiful, and the good as the aim of all education.

A KINDERGARTEN MESSAGE TO MOTHERS

BY MRS. ADA MAREAN HUGHES, TORONTO, CANADA

I

The mother of a large family, who had borne the burden and cares of motherhood in an uncomplaining, self-sacrificing spirit, had been reading that helpful book, *A Mother's Ideals;* and as she handed it to another mother like herself, she said: "I think I have not honored myself sufficiently for being a mother."

She had been patient with each added care and had given freely of loving service, but had not realized that in such giving she had made herself worthy of the highest honor given to humanity. To her, as to most women, the increase in family cares had seemed to mean less opportunity for leisure and culture, and a sphere narrowed more and more by the dull routine service of a mother in the home where her personality must slowly dwindle into insignificance thru the aggressive force of the fresh, growing life of her children; her only choice being to accept the situation uncomplainingly or to trust her little ones to the care of hired servants.

It is this sense of the insignificance of the office of motherhood that has lessened the joy of life for many a self-sacrificing woman, and thru self-abasement many have limited the positive influence of their devotion to their children.

On the other hand, it has been the apology and excuse for many others who have felt that they could not make such a sacrifice of their own identity, even for their children. Thru lack of insight into the sacredness of child life has come failure to recognize the relationship between mother and child as having any significance beyond proper provision for physical well-being, and has led to the mistake of supposing that money can buy the required service and leave the mother free to follow more congenial occupations.

It is strange how slow we have been to recognize that such service without the vitalizing influence of mother love is external and negative in its effect in character development. Money can never buy love, and love divorced from service cannot make itself felt in the heart of a child.

Froebel's message to mothers is full of hope and promise. His revelations of child nature set the mother and child in the foreground of life interest. He shows us the child, an unfolding life, not as the future man or woman made small, but the potential being whose future is to be shaped by present and coming influences, and the fountain source of whose soul stimulant is sympathetic mother love and service.

To the mother, primarily, is given the task and privilege of caring for the child at this most important stage of life, when any and all influences make or mar the character for all time.

We have heard a good deal of sentimental discourse about the instinct of mother love and its all-sufficiency as a guide in the nurture of child life, but it is the exception rather than the rule when it proves itself an infallible guide. Human instinct must be illumined by reasoning insight to suffice for human guidance. Instinctive love cannot relate the present with the past and future, and is therefore fluctuating and uncertain in its expression.

To understand the nature of a child, to know the process of the unfolding of a divinely created being, requires the exercise of the finest powers of the mind, and, in giving the service of true motherliness, a degree of consecration is necessary which involves the deepest spiritual insight.

When God infolds his own life in another human body and gives it into a woman's care to foster and nurture, can anyone who realizes the sacredness of the mission fail to give freely and ungrudgingly her best selfhood to the task, and feel herself ennobled by her service, glad to be a coworker with God? It is a work of exaltation, and every mother may walk with face uplifted to the stars, if she realizes its full blessing, and the world will learn in time to give her homage.

There are other years given to everyone for the development of intellectual strength, for satisfaction of the taste for artistic or literary achievement according to inclination and power, but no other years will be so full of blessing as those given cheerfully to the nurture of infancy and childhood.

When we realize what a power that instinct of mother love can become in the soul of a woman who has insight to feel that it is God's provision for the soul life of her child, we long to point out the blessing to those who have not yet seen, for the sake of both mothers and children missing so much of life's joy and best blessing.

All the wealth of culture with which woman can enrich herself, all the strength of reason she can develop, the consecration of a broad, responsive, sympathetic nature, are not too much to bring to such a task. Consciously exalting her office, she enters upon the daily routine of domestic life with a joyfulness which keeps the whole sympathy of her children. In their unfolding life she recognizes illustrations of the truths of deepest philosophy, and in commonplace events of every day she reviews in the concrete the truths which before were seen only abstractly. There is a glowing vitality in such thought which mental exercise alone could not give. Physical strength depends largely upon the action of the mind, and a consciousness of the wealth of her influence in these young lives does much to check the tendency to nervous exhaustion so much to be deplored among mothers of today. We want not less of motherhood, but an increase in the quality; we want a richer, fuller insight into the divine meaning of the office, to make the new woman, renewing herself day by day in the joy of living.

Women have sought honor in social life, in literary achievement, in culture, in philanthropy. Many gain local fame as housekeepers and in the culinary arts, but we have yet to realize how infinitely honorable above such recognition is the office of motherhood, when well and wisely administered.

One of the highest aims of mothers' clubs should be to idealize the office of motherhood so that all may look beyond the narrow limits of everyday duty and weariness, and in the view from the hilltop find the interrelation of the light and shadow of daily living. Such an outlook will fill the days and hours of monotonous labor, which are inevitable in every home, with hope instead of grim endurance. There is a vitalizing spiritual reality which underlies all living, but often our eyes are downcast, and we see only shadows.

It is an uplifting vision to see that these weary hours of watching and work are a part of the process of unfolding life, and that the loving service which mother love and life give is the sunshine in which the child soul grows into a developed power for divine work in the world.

The child as a divine creation for a divine purpose, self-unfolding, self-determining, is a revelation of Froebel to the mother.

Old-time orthodoxy, with its adult ideas of adult nature as needing regeneration, missed the thought of childhood as a fresh generation from the divine hand, and read the possible tendencies of heredity as the burden of sin already committed, to be atoned for by the innocent babe, and in the name of religion declared it to be totally depraved in conception. It was the honest conclusion of those who conceived child nature to be only adulthood written small, of those who saw in the unfolding bud and in the ripened, perfected seed the same life conditions and functions, because in the one line of process for a common end.

Motherhood has always loved the supposed little sinner notwithstanding the defamed character, and instinctively clothed him in the white garments befitting sweet innocence, while with outward word accepting in creed what the heart denied.

Froebel's interpretation of the nature of the child comes to the help and comfort of motherhood and dares to say, and proves it true, that the mother instinct is true to divine purpose and reason.

Depravity cannot exist except where the developing selfhood has wilfully debased its power to act by persistently serving the sensual instead of the spiritual nature.

It is one thing to be a possible, or even probable, sinner; it is quite another thing to atone for a burden of sin which we cannot understand, because there is nothing in our experience to show its relation to our own life or any other life. In the possibility of sinfulness we mark the great need of wise training to avoid sin. Hence the terrible significance of wrong, or neglect, in training.

Froebel shows us the child creating for himself an ideal character or selfhood, growing thru exercise of an embryonic selfhood in lines of natural interest.

As Froebel's idea of the child comes to be accepted as the true interpretation of Christ's love of children, we come face to face with the inevitable conclusion that parents are most solemnly responsible for the training of the child in infancy as well as responsible for its heredity, and we cannot do other than demand a training for parenthood.

I have a hope that in this new philosophy we shall find the antidote for the evils of present university and college training, which so often results in a wrecked, unbalanced physical and mental equipment for the student.

To return to Froebel's ideal of infant education. We have misunderstood the child nature in thinking the early days of infancy of little importance, except in matters of physical good and comfort, but with newer light we are impressed with the thought that in these playing years the child fashions the selfhood which, as it comes to maturity, reaches out and shapes and controls the environment as it wills.

From one single embryonic cell the whole structure of the body is evolved, in its complexity and variety of function. If it is defective, the being is physically dwarfed from the beginning. It is equally true that, if the first emotions of the soul are chilled or neglected, unfolded selfhood is forever dwarfed in its power to enter into other life thru participation.

When we reach the ideal of the life of the individual as culminating in responsive sympathy with brother-man and reverent communion with God the Father, and realize that development includes the completeness or incompleteness of every degree of every stage, we begin to see something of the importance of these first days of budding sympathy and the value to all future life of sympathetic nurture of infant emotion.

If the first emotion is starved, all spiritual insight is deadened, social responsiveness is dwarfed, and the man falls short of divinely created possibilities, thru the defect of initial response.

As the Bible is an inspired revelation of the universal nature and destiny of man, and reveals love as the process by which he enters into his spiritual inheritance of sonship and brotherhood, beginning with Genesis, or origin, and completing itself in Revelation, or heavenly vision of a new life, so the *Mother-Play* reveals the particular relation of mother and child in the unfolding of child nature. It is a revelation of child nature from its genesis to the personal revelation of a conscious selfhood as co-operative man and child of the divine Father. It defines the steps in the process of that unfolding and the significance of its relationships.

It shows the vital spiritual relation between the sympathetic heart of the mother and the responsive play of the child. It gives typical experiences showing points of contact and interest, vital fundamental centers out of which spring the fountains of universal life, and defines simple means of stimulus lying right in the field of everyday contact.

There is no message from the kindergarten to mothers more important, it seems to me, than that plea of Froebel's to "let childhood ripen in childhood." Recent investigations in child-study startle us with suggestions of arrested development, not only in bodily and mental powers, but of spiritual strength and insight, where we have been wont to see, as we thought, only willful lack of participation. We are equally startled with the suggestions of premature development in as many directions, and the inevitable degeneracy which must follow.

The schools are not responsible. They are just what the majority of the homes demand, and when the mothers are sufficiently thoughtful to define what they really do want, and are willing to work for the realization of their ideals, they will succeed.

Our children are not allowed to play naturally and freely. The conventionalities of adult life crowd upon this fresh young life in its upspringing joyousness, and we cramp and dwarf the spontaneousness of play and childish outburst of feeling. Let the flower of life flaunt its gay colors unrebuked. There is a vital relation between these bright petals and the slow-maturing seeds which now are green and soft and hardly perceptible. The strength and firmness of maturity depend upon the wealth of natural expression in blossoming time. Our children must play. They must have room. They must play spontaneously, unrestrainedly. They must be glad in their play, if you want individual courage and joyful strength in mature life.

Too boisterous expression is possible, but the restraint should not be external, lest it develop insincerity, but restraint will come from loving impulse of the heart, if the sympathies are intelligently, systematically stimulated in the union of mother and child.

I believe that educational reforms will not find their limit until every home recognizes this inalienable right of childhood and gives it room and sympathy, and not until it will be possible for every child, rich and poor alike, to come in contact with nature and find freedom for joyous expression of the play impulse in public playgrounds.

The best prayer is the one of work, so let us mothers and motherly women rouse ourselves to work systematically and persistently for such privileges for universal childhood.

THE INFLUENCE OF THE KINDERGARTEN UPON THE SCHOOLS

BY F. LOUIS SOLDAN, SUPERINTENDENT OF SCHOOLS, ST. LOUIS, MO.

[ABSTRACT]

Superintendent Soldan stated that the civilization — and the schools as a part of that civilization — of modern times is eclectic, a general proposition which is illustrated by the contributions lent by the art of all lands and all times to the making of the great Congressional Library. Among the many valued influences of the kindergarten, its influence in causing children to see mathematical truths more clearly, and to read more quickly and intelligently, were emphasized. The Washington practice of putting in one class the children from intelligent homes and those from the kindergarten, while children with less power to work are put in another class, was mentioned.

In tracing the history of the influences that have prepared the way for the kindergarten in the United States, Mr. Soldan mentioned four points:

1. The influence of Horace Mann and of the Oswego Normal School in diffusing Pestalozzian and other fundamental principles and practices of education.

2. The influence of Dr. W. T. Harris, to whom he paid a feeling tribute, and of St. Louis, in establishing kindergartens, and emphasizing the Hegelian doctrines of sense-perception and thought.

3. The personal influence of Miss Susan Blow, who added to Hegelian principles Froebel's doctrine of self-activity, which has broken up the scholasticism of the schools, and made the manual-training school possible.

4. Herbart's philosophy, especially the doctrine of interest, when properly stated. Incidentally the likenesses of Froebel and Herbart were indicated.

DEPARTMENT OF ELEMENTARY EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY, JULY 11, 1898

The department was called to order at 3 P. M. in the First Congregational Church, by the president, Dr. William N. Hailmann, Dayton, O.

The following program was presented:

Address by President William N. Hailmann.

"Play as a Means of Idealizing and Extending the Child's Experiences," Miss Allie M. Felker, State Normal School, San José, Cal.; discussion by Miss E. V. Brown, Normal School, Washington, D. C.

"Successive Differentiation of Subjects of Instruction," Dr. Z. X. Snyder, president State Normal School, Greeley, Colo.; discussion by Superintendent T. A. Mott, Richmond, Ind.

President Hailmann appointed the following as a committee on nominations:

T. A. Mott, Richmond, Ind.
Miss E. A. Denny, Washington, D. C.
Miss Sarah E. Miller, ——, Cal.

The meeting adjourned at 5 P. M.

SECOND SESSION.—TUESDAY, JULY 12

The department met at 3 P. M. in the First Congregational Church and was called to order by the president.

The following program was presented:

"Value of the Hand in Acquisition of Knowledge and Expression of Thought," Miss Mary F. Hall, superintendent of primary work, Milwaukee, Wis.; discussion by Superintendent George Griffith, Utica, N. Y.

"Manual Training in Elementary Schools," Principal Richard Waterman, Chicago, Ill.

"Social Co-operation," Superintendent B. C. Gregory, Trenton, N. J.

The report of the Committee on Nominations was given as follows:

For *President*—William N. Hailmann, Dayton, O.
For *Vice-President*—J. W. Carr, Anderson, Ind.
For *Secretary*—Miss E. V. Brown, Washington, D. C.

A vote of thanks was offered to the local committee for its thoughtful provision for the comfort of the department.

HARRIETT E. SMITH,
Secretary.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

BY DR. WILLIAM N. HAILMANN, SUPERINTENDENT OF INSTRUCTION,
DAYTON, O.

Thruout the educational world the conviction is gaining ground that, in order to reach in its work the real life and character of the pupil, the school must modify its practices in many ways; that it must eliminate from organization and method certain traditions of mediævalism which still cling to it, and that it must enter unreservedly upon certain new paths, indicated most comprehensively by Froebel.

The traditional school deals chiefly with what have been aptly designated as school branches of instruction and the corresponding forms of technical skill. Even in its ethical work, it confines itself mostly to the school virtues, such as punctuality, promptness, and obedience. It draws its material from the past; it excludes the living present and turns its back upon the future. Hence it is a stranger to the science and art of life which lies in the present and tends toward the future. The traditional school is interested in the origin of man and ignores his destiny.

From this condition progressive education has sought deliverance since the days of Bacon, as attested by Comenius, Locke, Montaigne, Rousseau, Pestalozzi, Heusinger, and scores of others. The fullest formulation of aim and method, however, was reserved for Froebel. He, for the first time, in clear and simple words, recognized the proximate aim of education as the co-ordination of individual purpose with the progressively manifest destiny of man. This formula frees education from its mediæval trammels. It deals primarily with the child. For authority it substitutes insight. The worship of the past yields to the control of the present and to the deliberate conquest of the future. Life, with its varied experience and rich opportunities for achievement, takes the place of the book.

Yet authority, the past, and the book are not discarded; nor do they fall into contempt. On the contrary, they become invested with a higher dignity, for, altho they have ceased to be ends in themselves, they have become indispensable means in the attainment of higher aims. Thus is avoided the error of breaking with environment and antecedent; reform rests on the discovery of the true place and value of these, not only conserving them, but giving them new significance and higher purpose.

In the formulation of his principle of method Froebel is equally wise and conservative. He preserves, indeed, the traditional formula which bids the teacher proceed from the concrete and particular to the abstract and general, but he extends it by requiring the application of the abstract and general to new concrete and particular facts and purposes. In this he is followed by the Herbartians. Yet he goes farther. He demands that these particulars should coincide as nearly as possible with the pupil's own spontaneous desires, that the pupil should apply his general facts and principles to his own experience, his own needs and aspirations. By each new gain in insight, the life of the pupil should, at the very time, be enriched and extended, gaining in aspiration and depth, in productive and creative fervor and efficiency. In other words, he requires that the essential and practical identity of the concrete particular and the abstract general should be shown and become manifest in the actual life of the pupil at his respective stage of development.

This leads Froebel to recognize the significance of manual activity and play in mental development, and his new education means to lead the former to work and to creative art, and the latter to conscious social co-ordination in common social endeavor. Froebel sees in humanity the highest expression of creative thought. With reference to this, the child appears to him as a part, but also, and in a higher sense, as a whole in process of development, a whole in which humanity is to attain consciousness of its dignity and to reach a higher plane.

Froebel successfully overcame in his work the fatal dualism which formerly had fancied impassable barriers between mind and body, which had denied the paramount value of the hand, and had placed sole reliance on the word, more especially the printed word. He recognized the unity of body and mind in life. To him the hand appeared as the outwardly acting mind; in the deed thought is realized, completed. The word appears to him, on the one hand, as treasuring past achievement in the onward march of humanity, and, on the other hand, as mediating between members of society or social groups united in common interests.

From these considerations it will appear, as was previously indicated, that Froebel's new education does not underestimate the value of the material of instruction of the traditional school. On the contrary, it intensifies the importance of this material by giving to it in its treatment direct bearing, not only upon the prospective, but also upon the actual, life of the pupil. Fundamental data for logical treatment are furnished by the pupil's immediate environment and experience; motive for action is found in his own natural interests. On the other hand, the outcome of thought and effort passes at once, more or less completely, into the pupil's actual achievement life, and furnishes food for progressively higher aims and ideals, as well as incentive for correspondingly deeper, more persistent, and wider research.

Thus, steadily, naturally, continuously, compactly, play is lifted into work, fancy into creative art, interest into devotion. Starting from narrowest surroundings, the pupil, at first impulsively and incidentally, but later on deliberately and systematically, makes ever wider excursions into broader and more distant fields. Technical practice and the book, to which the traditional school was wont to bring the child by force or by cajolery, or, worse still, by the unworthy heat of competition, are sought by the pupil as indispensable requirements of success in the achievement of coveted purpose and in the attainment of cherished ideals, individual and social.

The applicability of Froebel's educational principles in practice had been amply proved by him, not only in the kindergarten, but also in advanced work, notably at Keilhau. Still more strikingly has the eminently practical character of his scheme in its application to elementary school work been shown by many earnest teachers in the United States. Indeed, this scheme is so fully in consonance with distinctively American life that its spirit permeates more or less helpfully every department of the American school.

On this account, and in order to assist in lifting a desirable instinctive tendency into purposeful leadership, it was decided by the Elementary Department, at Milwaukee, to devote the sessions this summer to the discussion of a number of the leading features of Froebel's educational scheme in their applicability to elementary work. These features are emphasized in the program before you. They embrace the educational value of the hand, of play, of spontaneous purpose, of social effort, and of attention to the child's needs in the successive differentiation of subjects of instruction.

I would not be understood that by such action the Elementary Department is to be committed to an effort to Froebelize American education, to the exclusion of whatever good it may hold from other sources, and still less to the detriment of its own native sturdiness, its open-eyed independence and practical common sense. Indeed, everyone familiar with the life and work of the earnest teacher whose name graces the principles to be discussed is aware that such an effort would be wholly out of harmony with his extreme modesty and aversion to personal following. Merely a new direction would he point out in which light is to be found. Merely as a contribution to the common work would we add to whatever good may have come to our schools from Locke and Rousseau, from Comenius and Francke, from Pestalozzi and Diesterweg, and even from Hegel and Herbart, the good which Froebel pointed out, and which is destined to vitalize every phase of education it touches.

I congratulate the department upon the success of its officers in securing for the discussion of these vital points experts whose equipment, intellectual integrity, sympathy with childhood, and elevation of ideal give them more than ordinary claim to be heard and followed. There is no doubt in my mind that their presentation of the topics will fully realize the high anticipations of the department, and will serve as a permanent leaven for good to teachers and schools thruout our broad land.

PLAY AS A MEANS FOR IDEALIZING AND EXTENDING THE CHILD'S EXPERIENCE

BY MISS ALLIE M. FELKER, STATE NORMAL SCHOOL, SAN JOSÉ, CAL.

The balance wheel of a nation turns on the well-directed plays of childhood. To adjust this balance wheel in the lives of individuals must ever be the mission of our common schools.

Play has always been a determining force in national development and progress. England, for example, owes her greatness to the play instinct. Wellington said: "Waterloo was won on the playing grounds of Eton." The thought dominating the school mind of today is play. America awakened to a realization of its value when she began to establish kindergartens and to make a connection between them and the public schools, thus making play the basis of her educational system.

Aristotle, Comenius, and other educators before Froebel's time, considered play essential to the child's development, but it was a mere matter of theory until Froebel put it into practice. Since his time physicians have learned that an inactive child is either mentally unbalanced or ill; teachers know that they should make a special study of children who do not play; college men think games a panacea for all the ills to which human flesh is heir, and leading educators consider play a safeguard against crime in the commonwealth. To understand that play is a means of idealization one has but to look into the boyhood of such men as Washington and Edison.

Play, to be truly educative, must have a double meaning. To the parent and the teacher it must mean a direction of the child's thought along the line of his activities. To the child it must mean action without special hindrance, opportunity to work out his own ideas. As "the organizations of developed society are exemplified in the plays of childhood," it lies with the citizens, the mothers, the fathers, and all friends of education to provide right circumstances for joyous, loving, social activity.

Three ideal conditions for play are normal children, model schoolhomes, and professionally trained teachers.

It is a comparatively easy matter to bring experience to a well-born, normal child, and to establish in him high ideals; but well-born, normal children are not the rule. An educator says that kindergartens and teachers have to deal, rather, with children incapable of stable and continuous exertion, who come from unstable and dissipating environments, and it is only with great difficulty that these children can be led to acquire the habit of concentrated and faithful performance of work, which is indispensable to a vigorous, intellectual growth. Thru regular, well-directed play, however, the child may be given "something of that basis of stable habit, of regular response to right moral stimuli, which is the foundation of all intellectual and moral education."

"The most important function of play," says an authority, "is to educate the individual for his life work in a network of social relationships." It cannot be denied that the ideal home, the home in which are found the playroom, the attic, the sand pile, the workshop, household and barnyard pets, educational games, suitable pictures, books, papers, and magazines, furnishes excellent opportunities for gaining experience and establishing ideals; but even this ideal home fails to satisfy the well-born, healthy, normal child before he reaches the age of four. The grown-up atmosphere does not meet his social requirements, and if he is to play rightly, he must mingle with his equals, little people who can sympathize with him and have a keen appreciation of his pleasures, pains, and friendship.

The kindergarten or school to which he is sent should, as certain educators have said, "be a complete community and embryonic democracy, where the child is enabled to take lessons in love and self-respect, in duty and in privilege, in humility and self-esteem, in subordination, co-ordination, and independence," and this school home should be surrounded by the beauties of nature, the great storehouse of children's ideals. These the child should be led to take in thru the senses, until he is able to construct clear mental images and idealize to such an extent that he will know God by his handiwork, catch his smile in the flood of light which gladdens the earth, and hear his voice in the rhythmic movements of the universe.

A professionally trained mother-teacher, a lover of childhood, wise as Socrates and self-denying as Pestalozzi, is needed to guide the baby tongue, hands, and feet thru the maze of play into the realm of idealized work which shall be lifelong in duration.

Experience and perfect idealization are the result of conforming to certain laws—laws of self-activity, unity, or concentration, as the Herbartians have renamed it, and the much-abused laws of analysis and synthesis, and the connection of contrasts, all of which merge into the law of life, love, or gravitation in the moral and spiritual world. The ideal teacher will lead the child to conform to these laws in such a manner that he will not feel that they are a special hindrance, but rather that they are the only means of turning what interests him most "to practical account in play." That a child may understand people, he must imitate them;

that he may understand stories, he must dramatize them; that he may develop true ideals, he must create. Robert Louis Stevenson says that this crude attempt to realize truth "is, in some ways, but a pedestrian fancy which the child exhibits."

This walk "in vain show among mists and rainbows" will, however, if guided aright, result in a strong, healthy imagination. "Play takes children where they love to be, into the world of happy make-believe," where objects are transformed into birds, flowers, and animals, and where long, delightful journeys can be taken into storyland or that enchanted realm in which the sun, moon, stars, wind, and waves speak to the child with "voices prophetic," until he feels himself at one with the great, throbbing heart of nature.

To train the imagination so as to bring about the best results, the teacher must deal largely with the emotional nature. But she cannot educate the emotions without dealing with the whole mind, and in doing this there is danger that she may lose sight of the end and aim, or the fact that the crowning feature of her work is to establish ideals. Continued work in the training of teachers shows us where the danger lies. There is too much instruction, too much interference with the ideals of children. The over-enthusiastic kindergartner or teacher attempts to do too much for the child, and she frequently forces him to see thru grown-up spectacles. She does not enter into his life, but leads him rather to enter into hers. She seems to regard questioning as her business, and she does not stimulate him to do his part in the work of education. If the teacher would supply conditions, and not assist the child too much, but rather help him to help himself, she would pave the way for him to gain experience and realize his ideals. Over-questioning, helping children until they become helpless, and giving them a surfeit of play or work, have retarded educational progress in the past. The teacher of the future will inspire the child to do for himself, fan the God-given powers within him until they glow with a spirit of usefulness, burn with the steady fire of talent, or burst into the living flame of genius.

Both in the home and in the school the play spirit should be fostered. The home where father and mother become as little children and play regularly and systematically for an hour or two a day with their boys and girls is a type of what all homes should be. There is no home so rich or so poor that parents cannot thru play enter into the lives of their children. By guiding them rightly into senseland, storyland, and cloudland, parents pave the way for the teacher who in the kindergarten and school can give greater opportunity for individual and social activity. Experience can be gained and ideals established thru imitation and dictation exercises, leading to invention; music, color plays, and drawing, leading to art; stories, the ethical basis of history and literature, and social indoor and out-of-door games, resulting in the all-round development of the child.

To imitate action and speech, under right conditions, is to play freely and joyously. Imitation gives the child a realization of self, and makes him in a measure "self-regulative." Imitating the cries and actions of birds and animals, and copying the ways of playmates and older people, are in a way inventive, but the key which opens the door to true invention is precision in dictating. Imitation causes the child to feel a certain sense of power; following dictations makes this sense real to him. Skill and thoro preparation on the teacher's part are necessary to give a clear, concise, interesting dictation, one which will not end in itself, but "prove the child to be an inventor in the midst of it." Invention is too often the result of accident. In the kindergarten it is the healthy outgrowth of the Froebelian plays. To carry out the laws underlying these plays in the occupations of the elementary school is to train the imagination, or foster the spirit of invention.

Fletcher says: "Let me make the songs of a nation, and I care not who makes its laws." That a nation may produce makers of song, the spirit of music lying dormant in every child must be awakened in earliest infancy. The power to express poetic thought in song can best be developed thru systematized play. Tomlins says: "What one voices in song one lives." In the finger plays of the nursery, beautifying and sanctifying the home spirit; in kindergarten games, symbolizing nature and idealizing work; in the educational games of the elementary school, where music is rightly blended with verbal speech, children are given an opportunity to voice in song what they see, hear, and feel, and thus to live it. That the wholesome, elevating kind of music heard in the kindergarten be carried into the primary school is of vital importance. Too often we hear beautiful words set to street music and the lighter college airs in primary and grammar schools, and we see children marching out of their class-rooms to the sound of music that weakens and degrades their nature. The best is not too good for the future rulers of home and state. Songs and marches should be taken from the best composers. Music should always appeal to the highest and best in the child. The school should give the child an appreciation of fine music; indeed, it should stir his whole being with poetic love, patriotic fire, and religious thought—should be a means of illuminating the imagination until ideals are formed which, when fully realized, will add to the happiness of the world by expressing "sympathy and love to fellow-creatures and worship to the Creator."

Baldwin says: "The beginning of the art instinct in children seems to appear in the occupations which serve to bring out the imagination." Color play is important for gaining experience and developing ideals. Nature affords, perhaps, the best opportunity for thought-getting. Animals, birds, insects, flowers, the rainbow—all bring color to the child. Light playing on the lake, along the stream, in the spray of the waterfall or fountain, reveals to him innumerable rainbow fairies who delight his fancy and enrich his imagination. His ideals may be carried out analytically in folding, cutting, weaving, etc., and synthetically with crayon, pastel, pencil, and brush. The child passes easily and naturally thru the daubing and experimental stages—both often painfully grotesque to the teacher—into the beautiful realm of artistic delight. His keen sense of enjoyment, and his desire to represent what he sees, hears, and feels, are gratified or turned to practical account in color play.

Drawing, another method of expressing the child's ideas, is an excellent means of gaining experience and realizing ideals. Conceptional drawing is play to any child, and this kind of play should receive proper encouragement from parents and teachers. It leads to true object drawing, and is a means of bringing out and intensifying ideals. Automatic, ambidextrous, and inventive drawing have their origin in the gift plays of the kindergarten. Originality is the result of dictation exercises; indeed, this play gives "constant opportunity for imitative learning and invention."

Storyland is another birthplace of ideals. Here abide truth, beauty, and goodness, in a form awaiting materialization. Purely imaginative, realistic, scientific, and historical stories, told and retold in clear, concise English, with appropriate gestures, give many ideas which the child can make real thru doing, and go far toward establishing a pure literary taste.

Material and pictorial representation are means of working out and intensifying the ideals of children. Sunday-school teachers are beginning to realize the value of the play instinct in the use of material and pictorial symbols, and they are supplying the conditions for a childlike understanding of biblical truths.

The primary teacher wisely continues the drawing and story-telling of the kindergarten. We have in mind the nature work of a primary school where the conditions are such that in the springtime the second-year pupils have an opportunity to study the life history of the narcissus, hyacinth, and other bulbous plants. With each plant is connected a beautiful story, an old-time myth fraught with ideas which the child can realize in sand, clay, cardboard, paper, water color, drawing, and in social games. Nature, in her flora and fauna, furnishes abundant material for story and song, and as the child advances under wise guidance, she will lead him to the storyland of books, where he will make the acquaintance of wise and good people, who are a living inspiration to become noble, great, or heroic.

A writer says that many plays originate in the instinctive desire to exert force, or to measure it against the force of others. For the social progress of the world it is necessary that individuals feel and exert this power within them. It is desirable that children become acquainted with games which involve competitive skill, strengthen the player physically, and help to lay the basis of idealization in history and art. Greek games are among those well suited to the requirements of children. They should be selected wisely, however, and adapted to the needs of the pupils. The power of adaptability should be one of the strictest qualifications of a teacher. That games may be successfully played in schools, teachers must exercise judgment in adapting them, and give constant opportunity for spontaneity.

Make a child happy, and there will be no difficulty in teaching him. Happiness is the proper condition for the reception of knowledge. If play is the legitimate business of childhood, then "to turn work into play is the teacher's highest achievement." Lessons in the elementary schools should be play work, free from toil or drudgery, so filled with enjoyment that they may successfully be merged into thoroly enjoyable life work.

Well-selected parlor games are valuable in giving knowledge and awakening aspirations. Kindergarten songs and games of the seasons, of animate nature, trades and occupations, movement plays, etc., are a power in training the senses and establishing ideals. Original devices suited to the needs of the pupils, devices based on sound pedagogical principles, have a place in the early education of the young; but devices are safe in the hands of professionally trained teachers only. When used, they should be largely based on the play instinct. Elementary schools, where the nature work and geography lessons are the result of gardening, field lessons, excursions, play in sand and clay, handling globes and maps, picturing with the brush, charcoal, pencil, and pen; where reading is the result of nature work, and stories told or read; where arithmetic is one series of games, involving counting exercises, buying, selling, measuring, building, and competitive number drills; where pupils are kept busy collecting plants, woods, shells, rocks, stamps, and books; where readers, spellers, dictionaries, and newspapers are made and illustrated by the boys and girls; where the school printing press is in constant use; where tools, the children's delight, are used in the sloyd and manual-training rooms; where miniature houses, stores, and workshops are made and furnished; where kitchen-gardening, sewing, and cooking are done by the future home-makers; where occasionally the solar microscope, graphophone, and animatoscope cause the children to roam fancy-free in unknown lands; where, on cold and rainy days, pupils go to the playroom to realize their ideals in spontaneous play, and have space and material enough to carry out their conceptions with scissors, pencil, crayon, and brush; where in the out-of-door sand pile they make mountains, dig tunnels, lay railroad tracks, erect houses, and establish missions; where the habits of fish, birds, insects, and other animals are studied; where free exercise can be taken and games played in the school gymnasium;

where there are spacious playgrounds for running and leaping games, hand-, base-, and basketball — these schools, the schools in which "children are not tortured to satisfy public opinion," are the birthplace of the arts, industries, and all that goes to make up life, liberty, and happiness.

Teachers who realize that "games of childhood and youth are an engine of great social value," and who can, thru them, "sum up the net results of the life of the race, and give it to the child, so that he shall be saved from repeating the errors that had to be lived through before the wisdom expressed by the ethical code could be generalized," are indeed artists. "To get children in the habit of forming ideals and of striving after their realization — to lead pupils from play, through effort, to productive and creative work," is the teacher's mission.

When children's fancy, or "seeing, hearing, and touching through a sort of golden mist," is transformed into imagination which "holds the hand of reason," and imagination is systematically trained along social lines, the balance wheel in the lives of men will be properly adjusted, and they will become "humane, generous, and liberal," or at one with the Spirit which rules the universe.

DISCUSSION

Miss Elizabeth V. Brown, Normal School, Washington, D. C.—During the long years in which educators have wisely thought, studied, and theorized on questions involving the intellectual, moral, and spiritual growth of children, the physical child has patiently stood awaiting his moment.

But new as the physical child may seem today, he has a reputable ancestry. History rings with his exaltation in the days of the Greeks, and gives occasional suppressed whispers of him in the ages which follow. That his day has come is manifested in the exciting chapters of college athletics; in the number of magazine articles he inspires; in his presence in the laboratory of the psychologist; in the high respect in which manual training and physical culture hold him; and, lastly, in the number of times and various departments in which his claims are considered in the program of the National Council and the National Educational Association.

In the primary school he asks but little from the hands of his teacher: the proper control of certain of his activities, and freedom to work out his own salvation with certain others; in return for which he promises her freedom from the fetich of discipline and easier access to his intellectual, moral, and spiritual avenues.

The key to these requirements is so-called play, which not only gives sway to the child's activity, but which also works off his overplus of physical and mental energy.

It is important, however, that he shall have the right kind of play.

To the researches of physiological psychologists and experts in physical culture acknowledgment is due from the schoolroom for much help in determining the character of play and its place in the child world (in school and out); for the introduction of medical inspection and the eradication of many common physical defects; for light on the physical and moral effects of recess, periods of fatigue, and the relation of physical culture to mental growth.

In our own city the gymnastic plays and games of the primary schools (particularly for the first and second grades) are designed physically to call forth actions co-ordinating the large muscles of the body, especially those of the trunk and legs. While subserving this physical purpose, they also cultivate attention and imagination, stimulate curiosity, inspire imitation, and, one step more, are correlated as much as possible with the seasons and the subjects studied in the grade.

Another means of accomplishing the same result may be found in the manual training adapted to the capacity of the children of the lower grades. Armed with scissors and pastepot, brush, chalk, pencil, and clay, the little workmen find many outlets for their activities and inlets for new ideas.

The creative instinct, the desire to use his hands, is strongly manifested in the first-grade child. What rigors of discipline are now averted in attempts to make children keep their "hands off" pencils and "to let alone" papers, rulers, etc., on their desks!

Here, too, in the making of things the aim should be to look toward the co-ordination of the large muscles rather than toward the fine co-ordination resulting from contracting finger play. In the making of boxes for his desk tools, or of envelopes to hold his "official documents," of magnets and compasses for his physics, of flags and drums for patriotic occasions, of Christmas and Easter presents for the home or for his schoolmates, the child discharges a vast amount of energy, and becomes, moreover, a useful member of society, a contributor to the world of labor.

The fascinating realm of nature study liberates and stimulates the playful activities of children, turning the hereditary instinct of cruelty into a feeling of fellowship, sympathy, and protection. Means to such ends may be found in the biographical treatment of the facts of animal life, which suggests the problems of the adaptation of the creature to its environment and of protective coloration. Excursions with the teacher to the woods, parks, and that always haven of delight, the zoo; songs and games illustrative of certain phases of plant and animal life; stories based on the child's experiences, and poems which are not in advance of such experiences, but which give a safe and wholesome basis to his flights of imagination and fancy, unite in furnishing means by which, thru the medium of play, the child is led into a richer, healthier heritage of mental power.

Just how much this element of play enriches, extends, and idealizes the child's experiences can hardly be measured, but that its influence has revolutionized the schoolrooms into which it has entered is beyond question. Instead of an atmosphere of repression and deathlike stillness, with long rows of "arms-folded" or "hands-behind-you'd" children, are found the legitimate noise and flutter of the beehive, a wholesome air of busyness, freedom, and joyousness.

The demand of the child for freedom from apparent direction and supervision has led to that excellent suggestion for the division of the class into groups of halves or thirds, fulfilling not only the conditions for liberty, but at the same time giving the teacher opportunity to do much more effective individual work than could possibly result from whole class instruction.

Thus a teacher, having furnished occupation of one sort or another for one-half or two-thirds of the class, calls the remaining children around her near the material (perhaps a live and frisky squirrel) and the blackboard. There is no "toeing the mark;" no petulant reminders, "Don't do this, or that;" the character of the material, the interest of the subject, and the manner of the teacher making demands upon the child's interest which preclude such disciplinary "necessities."

A brisk, interesting language lesson embodying the children's discoveries, queries, and exclamations either precedes or accompanies the reading matter which grows upon the blackboard while interest is at a white heat. The little ones learn to reproduce their own thought as it is visualized for them in the symbols; the point being that what is read is the child's thought, furnishing the key to natural expression. As the lesson proceeds, particular words are taken out for special drill. The children changing their positions, moving nearer to or farther from the blackboard, craning their necks, standing on tiptoe, some tracing the word pattern in the air with large free-arm movements, present an animated scene. A sweep of the eraser, and the word is gone! Upon which, as a signal, willing feet carry the little ones to blackboards in all parts of the room, where soon appear the recreated words singly or in sentences, with accompanying picture drawings. It is great fun for the children, involving as much play as a game, but resulting in the power to visualize, to reproduce, and intelligently use from four to ten words previously known only thru the ear.

The key to the secret of the child's interest and his rapid growth of mental power lies in the fact that he is formulating and representing knowledge which is his own, under proper environment furnished by the teacher. Eye, ear, nose, mouth, arm, hand, legs, and feet have been physically active in arousing excitation in different divisions of his brain, with which they have kept up communication along double tracts of nerves, resulting in the correlation of all parts of self — which is at once the most profound, fundamental, and valuable correlation in education.

As in physical culture, manual training, nature study, and reading, so in music, language, composition, number, and science, illustrations multiply themselves to show how, thru the binding relations under which mind and body co-operate, play may become a means of idealizing and extending the child's experiences.

It may be that due consideration may not seem to have been given to the "unruly" children of the Dodd Weaver, Huckleberry Finn, and Sentimental Tommy sort, who form such picturesque variations from the average good, human-natured boys of our schoolrooms.

Punishment is not the key to the problem in discipline of such children. It has been found, instead, that some tactful way of concentrating their straying attention serves the purpose better. Besides, in spite of all this surplus activity, it has been found that the boy learns. He is restless because of inward impulses which he has not learned to control. By the time he has been in school long enough to show some effect of the intellectual training, a like effect in moral training has been noticed.

These children, formerly repressed and punished, so that they played truant next day, have gained physical control, which has been turned into the acquisition of knowledge, from which moral growth has come as they have been led to a proper use of their activities thru the new idea of discipline, embodied in play.

SUCCESSIVE DIFFERENTIATION OF SUBJECTS IN THE ELEMENTARY SCHOOLS

BY Z. X. SNYDER, STATE NORMAL SCHOOL, GREELEY, COLO.

I. WHAT IS IN THE CHILD AND HOW DID IT GET THERE?

The supreme center in education is the child in its relation to its environment. What is in the child, how it got there, its development, the end in view, the means employed, its relation to nature, to man, to society, and to divinity, are all involved in the consideration of the subject.

The child is a composite potential. It is a vitalized, "mentalized," spiritualized potential. It is an involution of possibilities. Matter, life, mind, spirit—all have been active thru the ages in making this potential; in turn they are active in unfolding it into life, mind, and spirit.

This potential has in it an element of nature expressed in matter and life. The child's body, mind, and soul are inseparably connected with nature and by nature. This union has grown out of the intimacy thru the ages of the race and nature. Nature was the first teacher of the human family. The child feels familiar with it. There is a race tendency in the child to respond to the phenomena of nature. By a process of absorption, selection, and transmission the race has given to the child this tendency to respond to and assimilate nature. In short, the child is a concentrated evolution of the human family, as it has come into contact with matter and life.

By heredity the child has in it a parental element. Physical appearance, organic tendency, mental disposition, spiritual qualities of the parents may all be found in it.

It has in it *national* elements. Organically fixed in the child are national characteristics. Its appearance, its habits, its sentiments, its prejudices, its entire being and life, are all influenced by its nationality. The German child is German organically, mentally, and spiritually. The same is true of the French child, the English, Italian, or whatever child. Out of the stimuli that surround the child it is by nature fitted to respond to and most readily select that which is of its own nationality.

The child has in it *race* elements. The blood of generations is in its veins. The structure of the ages is in its tissue. The marrow of conflict is in its bones. Centers of doing are in its nerves and brain. Its entire organization is predisposed thru the experiences of the race. Racial dispositions of temperament are in it. Sentiments lodged in the tissues coming down thru the ages serve as centers of impulse. In short, exigencies that have led the human family to wonder, to wander, to fight, to love, to reflect, to purpose, to perform, to worship, to civilize, are in the child's organization. There are two lives in it: the life of civilization—race life—and its own individual life. Its own life is unfolded thru that of the race. In the child's nature there is the record of the stages of evolution of the human body, the human mind, and the spirit.

The child has in it a *spiritual* element. It has become a part of it thru revelation in nature, revelation in mind, revelation in events, and revelation in itself. There are times in the lives of men when something deeper than nature, when something deeper than human mind and effort, comes to the surface and reveals itself as spirit. God has immortalized us with his divinity. He is living in our natures.

Summing up, the child-potential contains the factors, nature, mind, and spirit. It contains nature as it has woven itself into it thru matter and life. It contains mind as it has woven itself into the race thru the individual and society. It contains spirit as it has revealed itself in nature, mind, and self. This potential is congenital. It is made up of race experiences born in the child. These experiences constitute its congenital apperceptive masses.

II. WHAT IS THE ORDER OF DEVELOPMENT AND WHAT ARE THE MEANS EMPLOYED?

Starting with the child as concentrated matter, life, mind, and spirit, or as the matter, life, mind, and spirit of the ages, its education is the evolution of these elemental possibilities under proper conditions.

The child-potential is constantly in the presence of the same forces that made it. It unfolds in the same order that it folded. In the unfolding it gives rise to certain series of activities out of which grow the subjects of instruction and training. The child's self-activity is the source of subjects, and not subjects the source of the activity. Subjects, as formulated by men, may occasion activity and aid in its development at certain stages; but they are not to be made the end in its development. The individual who is the product of subjects is a mechanical growth and never wholly finds himself in the social life. He does not know how to think, to feel, to act in accordance with, or respond to, his surroundings. He is not a natural evolution. Nature is a blank to him, and he cannot enter into the conscious life about him. An individual's life is the symbol of his development; if it be natural and in accordance with pedagogical principles, he readily finds his place; if not, he becomes estranged and cannot enter into the full realization of the forces that have made him. In accordance with this conception the order of development must be such that the individual can enter fully, readily, and righteously into the activities about him.

Nature seems to be the first force that enters into the formation of the child-potential. It is also the first to influence it in its growth or evolution. We have seen that nature, as it has entered into civilization, is in the child as a race element. Concrete nature is all about it. These two elements — race nature and concrete nature — have an affinity. They are congruous. They unite. Growth is the result — growth in all directions. When nature influences it properly, it grows physically; it grows mentally when touched and stimulated by it; it sees power, life, and design in it. Nature is instrumental in forming the temperaments and habits of men. Nature affects the individual as a physical product; appearance, stature, and life itself are affected by it. It affects the mental product of man. Agriculture, mechanics, science, literature, and religion are all affected by the forces of nature. Nature reveals to the child the deeper life — life behind life. It adjusts itself to it, because it is like it, because it is a reduced section of all nature. The life about the child touches, stimulates, inspires it; it sees, it thinks, it feels, it purposes, it performs. Life reveals something to the child that matter does not. It sees its kinship to nature thru it. It sees the plant select out of matter the flower. It is moved by its beauty. It begins to see God reign and live in nature.

In the life and growth of a child constant communion with nature is necessary. The child that is in the home stage of development and whose parents are in loving sympathy with nature is fortunate. What a feast they can have! That child is fortunate who has the opportunity of a kindergarten. Most of the time of the kindergarten should be given to a simple, loving communion with nature. I do not mean here a study of it, but real communion with it. Poetry and literature are full of it thru communion. Scientific books are full of it thru facts. Thru communion you get the spirit of nature; thru scientific study, the letter. Let us have more of the communion. All thru the child's school life nature should be a constant companion — nature as God gives it; not so much as a curator of a museum gives it. The teachers are too much of curators. They attempt to bring nature into the schoolroom. Dried leaves and flowers and plants and stuffed and pickled animals do not constitute nature. They are only the shells of it. Nature as the first great teacher is emphasized, because she is in the child by inheritance, because she is all around it, and because she is the first and most welcome guest invited into the sacred temple of a child's soul.

Mind, as it has entered into civilization, is in the child as a race element. Race mind is in the child; concrete mind outside of it. The concrete mind, as parent, neighbor, teacher, church, society, state, touches the child. These have an affinity. These are congruous — there is interest. They unite. The child unfolds. In teaching, the individual mind, as parent and teacher, touches the mind of the child to occasion the same experience in its consciousness as he possesses. If there is an affinity — an interest — the child develops. The social mind touches the child's mind with opinion and with the institutions of civilization, as the home, the school, the church, the state, and society. If the contact is congruous, the child takes into its nature the force of these opinions and these institutions. As a result it develops. The race mind touches the child thru history, literature, and art. It responds. It lives over the life of the race in miniature. In its growth it shares with the race its pleasures, its pains; its joys, its sorrows; its victories, its defeats; its realizations, its disappointments; its purposes, its ideals. In its growth each section in its life has a corresponding section in the growth of the life of mankind in general. This congruity of the race mind within the child and the concrete mind without it, and the development of the former thru the latter, fit it to become a wholesome, active unit in civilization.

In the child-potential is a spiritual factor. The spirit, as revealed in matter, in life, and in the institutions of man, is a mighty force in the education of the child. As the child comes into intimate communion with nature and mind, it sees more and more that they are vitalized and spiritualized, and that they are but the expression of the divine will in nature and in the affairs of men. Literature is another source of spiritual quickening. The immortal element in it is the spirit. This spirit touches the spirit of the child, and it responds. Its life is enriched, its spirit refined. Literature is soul.

Thus far this study reveals that in the evolution of the child, while it is gradual, well-marked centers differentiate themselves—centers of activity within corresponding to the centers of activity without. Out of the contact of these centers emanate all human learning and endeavor. They have given rise to all our philosophical systems. Out of these, naturally, philosophically, and pedagogically, are differentiated the subjects that the child should pursue in his education. These centers are the factors of the potential—matter, life, mind, spirit. The centers of force lying without the potential are the same in name and nature, and serve as agencies to develop it.

III. APPLICATION OF FOREGOING TO THE SUCCESSIVE DIFFERENTIATION OF SUBJECTS IN ELEMENTARY SCHOOLS

It seems that in the development of the child, matter first influences it. Its first adjustments are to those of temperature and resistance. This is the beginning of the interpretation of nature. As the element of consciousness expands and enters in, the adjustment and interpretations become more formal. It finally expands into physics. Physics grows out of the effort of the mind to interpret the phenomena of matter. In the first years of the child's growth its experiences with matter would scarcely reach the dignity of physics; but they might be designated as lessons in form and matter. The mathematical sense develops almost simultaneously with the recognition of physical phenomena. Mathematics grows out of the efforts of the mind to quantify phenomena. The "how large," the "how much," are the first wonders to be solved. The "how many" follows. At first the mind quantifies spatially; later, serially. Spatial quantification is geometry—form with the little folks. Serial quantification is arithmetic—number with the children. Pedagogically geometry—form—precedes arithmetic—number. Mathematics has definite subjective and objective sides. It does more to reconcile the child to its material and mental natures than any other subject. It gives the individual a reach that nothing else can give. The interpretation and quantification of the phenomena of matter engage the child from the beginning of its independent life (probably before it). In the home, the kindergarten, and primary grades, matter, form, and number engage the child's mind in its development. The objective, the simple, and the informal should characterize the work of the elementary school. As a rule, the abstract, the complex, and the formal are the bane of the child. The mistake of teachers lies just here. In the kindergarten the work in matter, form, and number should be incidental. In the primary department it should assume definite shape, and in the grammar grades it should differentiate into definite recitation. The child grows as it moves onward in its education; consequently the subjects become more complex and formal. They should, however, always have a concrete reference. The work in matter, form, and number, and in physics, inventional geometry, and arithmetic, should be on the laboratory plan. The hands and eyes should be used as well as the mind. What a splendid foundation such work would lay for the continuance of it in the secondary school!

The child very early manifests an interest in the phenomena of life. Natural history grows out of the efforts of the mind to interpret these phenomena. This subject gives a new outlook which no other can. It enables the individual to discover his relation to all things. He sees himself a part of the world of vitality about him. It serves well in the development of the inner connection of all things. The soul looks out and familiarizes itself with those things which are closely akin to the temple in which it lives. It feels itself a part of all things. At home the child incidentally comes in contact with life. In the kindergarten and primary school this contact is so directed that it takes the form of a loving association with life in its varied forms thru excursions, and as it is revealed in literature thru the myth. There is something in the child's nature that responds very readily to the nature sentiment of the myth. It is not strange to it. It has had the experience before in the race. In the grammar grades it takes on the form of zoölogy and botany. Having discovered somewhat its vital relation to animals and plants, it is prepared to study its own body—physiology. This preliminary training in matter and life forms an excellent preparation for geography. The earth is seen to be the home of plants and animals. Geography grows out of the interaction of matter, life, and home. The central thought in it is man's dwelling place. This subject differentiates itself to the dignity of geography in the later part of the primary department and continues to develop on up thru the grammar grades.

The mind centers within and without very early come in contact. The child is influenced by the individual mind and by the social mind. The individual mind, as parent, brother, sister, neighbor, teacher, preacher, coming in contact with the child, gives rise in the home stage and the elementary school to the expressive series of subjects; as babbling, play, games, songs, talking, writing, ethics, æsthetics, reading, constructing, drawing, sewing, cooking, sloyd, religion, etc. The stimuli to the development of these expressive subjects are ideas, someone to receive, and imitation. There is a dynamic tendency in an idea to objectify itself in some form of expression. This tendency is intensified by a spectator. The tendency in a human being to imitate is inherent. This tendency is racial. These stimuli form the basis for training in these subjects. With many of these subjects the training is incidental in the first stages of the child's education, remaining so thru the elementary school. Again, some of these subjects become somewhat formal in the grammar grades; but the idea that they are used in the expression of ideas should never be lost sight of. When this occurs, they become mechanical and useless.

As the social mind comes in contact with the child thru its institutions—the home, the school, the church, society, and the state—it is initiated into these activities and becomes a part of them. The work of the school must be such as readily to co-ordinate with these institutions of civilization. The kindergarten, the industrial work, all help to bring about a proper relation of the individual and the social organization. The child also comes in contact with the social mind thru history and literature. In history it is made acquainted with the deeds of men. The child becomes a spectator of all time. Its individual mind is worked up into the social structure—into opinion, into institutions. In literature the child is made acquainted with the best thoughts, sentiments, aspirations, and sayings of the race. Thru the fairy tale, legend, myth, and thru the deeds of heroism, the child is made acquainted with the early activities of the human family. It is further initiated into the soul or spirit of the race thru the novel, and thru historical literature. The concrete series of subjects, together with the race series, forms a basis on which rests the subjects of the formal series, and out of which they grow. All elementary schools are concerned very largely with these formal subjects. Indeed, that a child may learn how to communicate its thoughts, its sentiments, and its purposes is paramount. These forms of expression are the most human manifestations of humanity, and it is every child's right to have an opportunity to acquire them.

That the spiritual nature of a child should be cultivated goes without saying. This nature lies deepest. A child that has not a religious mother, that has not the opportunity of living in a spiritual atmosphere, is one whose best nature will not appear. This work is incidental; but the teacher who sees the unity of all things, and that all that is is but the expression of the divine will, will quicken the spiritual and religious nature of the children with whom she associates. Her influence is a benediction. The strong side of the kindergarten is that it is permitted to use the name Jesus Christ—the Christ-child—as the savior of humanity.

In conclusion, in the growth of every individual from infancy to manhood there is a successive differentiation of his natures. As he comes in

ELEMENTARY CURRICULUM

	CENTERS						
	I. MATTER	II. LIFE	III. MIND				IV. SPIRIT
			a. Individual		b. Social		
			Thought	Expression	Opinion	Institutions	
STAGES	Concrete series		Formal series		Race series		
HOME Incidental contact				Babbling Words Sentences Play		Home	
KINDERGARTEN Directed contact	Matter in form	Life in field in pets in garden in plays		Games Songs Making		School	Christ-child
PRIMARY Directed contact and study	Lessons in matter in form in number Geog	Lessons in nat. hist. in living raphy		Physical cult. Construction Music Drawing Reading Writing	Myth stories History stories Literature Fairy tales Travels Heroism	Church	Nature Religion
GRAMMAR Directed study	Lessons in physics in concrete geometry in arithmetic in algebra Geog	Lessons in animals in plants in physiology raphy	Inventional geometry Arithmetic Algebra	Language English German Latin Drawing Music Sewing Cooking Sloyd Physical cult. Ethics	History Literature Hist. effort Romance Civil gov't	Society State	Nature Literature Religion
SECONDARY	Etc.	Etc.	Etc.	Etc.	Etc.	Etc.	Etc.

contact with nature, his individuality develops. As he comes in contact with men and society, he transfigures his individuality into humanity. He develops his personality. As he comes in contact with the spirit of nature, with the spirit of literature, with the spirit of the living God—that deeper life—he transforms his personality into divinity. He develops his spirituality. These three—individuality, personality, spirituality—are the living momentum of every life. This momentum is the measure of success. Success is the realization of ideals. The highest realization of ideals is in the consciousness that you have made the most of life. Teaching is living with children. Living with children is bringing about a natural and harmonious development of all their natures. It is unfolding the potential. The order of the development of the potential is thru matter, life, mind, spirit. The successive differentiation of subjects in the unfolding of the individual grows out of these centers.

In the accompanying chart (p. 639) the order of the development of centers is from left to right—from matter to spirit. The order of the successive differentiation of subjects is from top to bottom—from incidental contact to directed study.

DISCUSSION

T. A. MOTT, superintendent of schools, Richmond, Ind.—The problem of arranging a course of study so that the successive differentiations of the subjects will accord with the unfolding powers of the mind of the child, and at the same time accord with the laws by which the various subjects in themselves unfold from the simple to the complex, from the lower to the higher, is perhaps the most difficult, as well as the most important, of all educational questions before us today. To make such a course of study will tax the powers of the broadest scholarship and highest professional knowledge of our time.

A course of study is an organic thing, not a mechanical construction. It must bring to the growing, unfolding life for which it is intended just the material that this life needs for its highest and most perfect development at every stage of its growth. The nature of the mind of the child and the laws governing its evolution and growth are in every sense the prime factors to be considered, rather than the needs of the child *after graduation*. The school life may in a sense be a preparation for after-life, but in a higher sense the school life is true living at the time.

The guiding principle that has controlled the formation of courses of study in the past has heen at every step the needs of the child the next term in the high school, in the college, in life after he leaves school, rather than the highest needs of the child necessary in order for perfect growth and true living. The important aim in each year's work was to prepare for the next year. The farmer wants his boy to learn to read and write and cipher, so as to meet the needs of the farm life. The merchant desires a wider reach of knowledge and experience, so as to enable his boy to succeed in the more extensive business activities. The university professor desires his son to prepare for college. The purpose of education with the majority of the people has been to give the children thru the schools a better chance to succeed in life.

This utilitarian principle has controlled to a large extent the formation of courses of study. If bookkeeping, stenography, typewriting, Greek, or Spanish were needed by the boy after leaving school, they were placed in the same course of study. We will probably all agree that in the true thought of today the primary purpose of education is the formation of character—the increase and development of the powers of mind and spirit, rather than the enlargement of mental possessions. And all agree that character here means "a measure of mental power, a mastery of truths and laws, a love of beauty in nature and art, a strong sympathy and unswerving moral rectitude, the possession of true ideals of life and the power to live consistent with these ideals." Education can mean nothing else. Every aim proposed by the educator not consistent with this high purpose of real living for the child will run counter to the true activities of the child mind.

In the formation of courses of study the subject-matter proposed for each year's work must be such as will co-ordinate with the needs of the child to live an ideal life and to grow rationally along lines of true development, taking into consideration at all times the life and the civilization constituting the environments of the school. Dr. Snyder has clearly set forth the potentialities of the child and their order of development, and surely these will form the basis for all scientific attempts logically to arrange subjects in a course of study. History, mathematics, language, science, and geography will, of course, constitute the subject-matter of our courses of study; but the differentiations of these branches and the divisions of their subject-matter must always be based on the highest laws of mental growth.

I will discuss but one of these subjects as to the arrangement of the course. History has taken its place as a subject in all modern elementary schools, but the logical differentiation of the various phases of historical work along psychological lines has been attempted by but few. The growth of the race from individualism in the uncivilized peoples to the complex organization of civilized life has been co-ordinate with the true growth of institutional life. In the family was the first effort of the individuals of the race to co-operate. The functions of the family in the care of the living and the care of the dead differentiated, and the church came into existence. The family, the church, the state, the school, and society, in its industrial and social phases, have blended their forces in the upbuilding of the civilization of the race. This growth of the race from the earlier simple forms of life to the complex civilization of today has been gradual and step by step.

Each child in its development lives over the life of the race. In its growth each division of its life has a corresponding phase in history. The simple, imaginative life of the early peoples has its counterpart in the trusting, fanciful period of early childhood. The child of six or seven comprehends the institutional life and civilization as seen in the story of the Eskimo, the Indian, and the Aryan much better than he can the institutional life of the complex, multifarious social organizations of which he is a member. In the heroism and courage of the "Persian Boy," as he is guided by principles of honesty and right, he sees the deep contrast to the temptations to cowardice, untruthfulness, and disobedience that the life in the school often presents to him. The race in which the hardy Spartan wins the crown from the graceful Athenian appeals to the boy and the girl, and in the life of the Greek he sees the first steps of the race toward liberty. The Roman love of law is in harmony with the youthful ideas of justice and honesty that cause the right-spirited child to despise to cheat. With the pagan Saxon the boy may, for a time, think that might is right, but with the Christian knight he learns that gentleness and mercy are above the might of the Saxon or the law of the Roman. The boy's desire for adventure is satisfied by the tales of chivalry, and the longing for practical exploit by the stories of the navigator and explorer. It is thru the views of history that the child gets in the systematic study of these successive epochs of the development of the race that he will find his power to understand the history of today.

Primary history work has usually been along the line of American history, at every step of which the complex interrelation of institutional life, of cause and effect, is such as to be beyond the reach of the child's mind. In this work the pupil fails to get the long view of the growth of the race that he needs and that his very child nature fits him to understand. My thought is that an important event in modern history, with causes and results running out in varied lines and connecting it with all branches of our many-sided institutional life, cannot be made the basis of true work in primary history.

The defect in work of this kind is apparent, not only when we view the subject-matter, but also when we turn our attention to the nature of the child mind. The children of the lower grade are much more able to understand the doings of the race when it was in its childhood than the complex events of the past two centuries, however we may simplify the wording in which they are expressed. The heroes of the early race seem to touch the child as those of yesterday do not. Enveloped in the dim light of the past, their figures seem gigantic. They lived their life and wrought their deeds when life was more simple and childlike than now.

When the child's own life and games are considered, it is not to be wondered at that the stories of men living when the race was in its childhood come closer to the pupils than stories, however simply told, of the events of this century.

The nature of the child, his inherent tendency to see things in relation, and his degree of development require that the history work for lower grades begin with the childhood of the race, and follow in logical steps, co-ordinate with the child's growth, the historical steps in the growth of the race.

Later in the grades, when the more complex and difficult subjects of American history are met, they are not only more interesting, but pleasant, as the child is ready for them.

VALUE OF THE HAND IN THE ACQUISITION OF KNOWLEDGE AND EXPRESSION OF THOUGHT

BY MISS MARY F. HALL, SUPERVISOR OF PRIMARY WORK, MILWAUKEE, WIS.

The child is ignorant and must learn. To learn the most, in the shortest time, he must sit passively and con, as his lesson, that part of the garnered wisdom of the ages which is "assigned." He must "apply himself" to it, i. e., he must iterate "three times three are nine," etc., orally, or by writing it on his slate ten times. Perfect celebration of this school rite requires that he shall never be caught looking at anything but his lesson. Later, to clinch his knowledge, he will spell and define multiplier, multiplicand, factor, and product. From time immemorial, in school history, has

"Old Bobby Blink, the pedagogue,
Kept school down in Big Squalid Bog,
Correcting well each polliwog,"

after this fashion; but he has not done it without protest from a long and honorable line of educational reformers, of whom Froebel, one of the latest, was one of the most original and radical. Froebel gave us a methodized way of learning by doing. The most aggressive idea of the new education is self-activity, one phase of which is my theme. It boldly declares that, since experience has been the great teacher of the race, it should be the favorite method of study in the schools. By handling things men learned the properties of matter; by making and using tools they bridged the gulf between barbarism and civilization.

But handwork in school is not to be thought of as the addition of something new to the course; it is a mode of studying what is already there. This is the kindergarten idea; also the view taken by that sturdy child of the kindergarten, the manual-training school. As it is a mode of investigation (and as we are ever told that "education is one continuous, organic process"), not the kindergarten, but that system which educates a child by practice before theory at the beginning and end of the graded course, in kindergarten and manual-training work, and educates him by theory before practice in the intervening years, is in need of explanation.

The principal reasons urged by the new education in favor of learning by doing are these: (1) A little work, properly directed, will teach a child more, and teach it more easily and thoroly—at the same time bringing more of the child's senses and powers into action—than many days of memorizing. (2) His finest qualities, capabilities, and forces cannot be reached by a narrow, verbal course of instruction. (3) Self-activity gives motor energy, habits of industry, sense of responsibility, clearness, discrimination, order, power to see things in relation, vitality of the moral nature and will, and courage to do, instead of the barrenness, timidity, capricious willfulness, physical inertia, intellectual sluggishness, and contempt for rectitude and law, which have ever been among the products of the "Bobby Blink" school. (4) School order should be habitual, and the result of the proper alliance of brain and muscle in intelligent effort, rather than anarchy held somewhat in restraint by a code of school artifices and penalties—forms of "nagging" by which active children are either subdued by spiritless task-work, or find an outlet for unused impulses to act in school mischief. (5) Purely subjective education, with its artificial and misleading "standings," and its self-consciousness and rivalry, is selfish, unsocial, and mischievous in its tendencies.

For these various reasons the new education utilizes the child's natural activity; its object is the increase of personal and social values; its products are character, power, a developed brain and hand, readiness to act, conscience, and social harmony. In practice it finds the clearness and discrimination of a child's thought registered in the work of his hands. It sees that the child who defines a preposition wrongly, without consciousness of intellectual sin, will feel the error in a spoiled mortise and tenon. This capacity to know a failure is worth much in education.

The plain, good sense of many sensible, practical people—farmers, merchants, mechanics, manufacturers, and others — supported by both the secular and religious press, is often, in these days, expressed in criticisms of schools and their graduates for their ignorance of affairs, powerlessness, and unpracticalness. It suggests more and more emphatically that we teachers free ourselves from tradition, and train the children in an all-sided way that will make them thoughtful and effective in the affairs of adult life. Farmers and mechanics ask that such rudiments of science as underlie the industries by which their children are later to live may be taught in such practical, experimental, thoro ways that their boys may become thoughtful, expert farmers and mechanics. They think, and they say, that this would be better than passing ninety in the mere verbiage of school subjects. This widespread interest in the training of children, and this criticism of schools, are significant signs of the times. The parent's greatest bequest to the future is not his titles to houses and lands, but his children. He grows more and more thoughtful about their equipment for life, that it may be better than his own. Those who manage schools are more or less conservative, both with the wise conservatism that treasures all real achievements and that foolish conservatism that preserves the dead forms and mechanisms that once aided the propagation of truth. Like those workmen at Ephesus, we teachers sometimes are opposed to any iconoclastic Saul of Tarsus whose philosophy would endanger our craft and destroy our shrines; and, like them, when our work is criticised, we proclaim, "Great is Diana of the Ephesians," by urging the force of precedent — which, of necessity, is on the side of the antique — and authorities — whom we should invoke with more care.

We teachers like a psychological reason for our faith and practices, and usually suppose that we have one; thus psychology, like charity, may cover a multitude of sins. Psychologists differ about many things, but on all essential things that touch practically the development of the cognitive powers there is substantial agreement. They grant the physical basis of habit. They say that performing given acts awakens characteristic thoughts and feelings belonging to those acts, and that, because function is constantly related to growth and power, what the physical mechanism, including brain, does decides its own character. Therefore a child is the architect of his own brain as well as his fortune. A good brain is the result of a development of the sensory, motor, and other cells into functional power by exercising special senses, by muscular work, etc. They say very emphatically that, if the nerve energy that distinguishes the doer from the dreamer is to be generated at all, it must be done largely during the period of brain growth. Action, not iteration of words, is, therefore, required as a brain developer; and we do well to remember that a large part of the motor area of the brain is assigned to the hand and arm. All this is practically ignored in the average school.

Children are not allowed to experiment with form and quantity — to weigh, measure, compute, make — they must say: "Five into twenty-seven, five times and two over." They recite tables about scruples and drams — a lesson that they may assign either to arithmetic or temperance hygiene.

The laws of mental science make education a series of systematized experiences and impressions, but the laws of the school board often make it largely a series of verbal exercises about the capitals of the Barbary states, the tributaries of the Hoang-Ho, and the definition of such unknown and abstract things as lie generally out of the child's field of vision; and they nurture this venerable school superstition by a despotic system of examinations and reports. If the child, under the sanction of a very old and wise law of nature — self-preservation — tires of word-grinding, and develops his motor cells by playing school tricks, the remedy is — another page of definitions! Or, the child at home who begs for "something to do" is told, "Sit and read your book," or to memorize, "I shot an arrow into the air." If the child is thwarted when his mental images tend to pass into action, or when his growth requires activity, being undirected, or misdirected, he educates himself by chance suggestion. If he builds with Robinson Crusoe, it is well; but we have learned that the boy is in danger who is led by dramatizing the lives of the desperadoes to confound lawlessness and heroism.

To know the value of handwork, watch a child who is making a cardboard box for the seeds from his garden. The main product is not a box, but a new conception of accuracy, perseverance, the application of law to work, the joy of accomplishment, with trained senses, feeling, reason, will, and the child's "activity in deeds as an index of his knowledge of things."

We are now living in a land and time which make peculiar demands upon the school. Future historians will surely note the unparalleled service of the American teacher of today as one of the large history-making forces which are transforming, by wholesale, and in one or two generations, heterogeneous elements into a national type, doing, successfully and rapidly, work which has required centuries in other lands and times.

But school authorities should see that the mingling of these differing elements in our schools in these times of transition, if not of industrial and social revolution, requires something different from the traditional, conventional school. The first grade of a certain ward school had this spring 166 children. Of these 86 were Irish, 31 German, 23 Italian, 15 American, 4 Arabian, 3 Swedish, 1 Welsh, 1 Danish, 1 Norwegian, and 1 French. Similar facts are common in our larger cities. They give some color to Bismarck's assertion that we are not Anglo-Saxons; and they show that the most important business of a school board is not the control of school patronage.

To know a child's life in a slum home is to know one factor of the public-school question. Defining the subjunctive mode will not cure slum torpor, or restore a lost sense of cleanliness to those who live contentedly in filthy kennels in dark, vermin-infested alleys. This segregation of great masses of the very poor in tenement houses, where they live below the general line of comfort—always a danger line—and the widening and darkening of our slum areas, are a distinct menace to the city. If the hopelessness, dissipation, and unthrift of the alleys are to be cured; if children who are tending to criminal careers are to be saved; if sturdy beggars who live contentedly on charity are to be inoculated with new ideas of self-respect and duty, the public school must teach the clumsy fingers of the children as a means of arousing benumbed powers. That the stars and stripes float over the schoolhouse is not enough.

Then there are some carefully nursed and helpless children of the wealthy to whom the story of the primitive industries—well known to parents and grandparents—is as a fairy tale. Many of these children are dull, superficial, lacking in insight into essential things, and some are positively depraved. How are we to train all these children, for whom the home often does so little, up to the standards of character, insight, and integrity that the fathers held?

The child who now comes to school belongs to a complex and unstable, because progressive, social order, for a part in which—himself complex—he is to be fitted. Like Browning's Sordello, he is

> Compassed murkily about
> With ravages of long, sad hundred years.

What shall be done with him?

His mother takes him to the superintendent or the principal, and he is "classified;" that is, usually he is placed with others of his age or size, or where there are the most vacant seats, or with children who can answer the same questions in arithmetic or grammar—and this is all! This is well, but it should not be quite all. The deepest insight, broadest knowledge, tenderest conscience, and most patient effort are needed by all who help to make or manage schools, that they may know that this should not be all.

Our schools, with some modification, are substantially patterned after the early New England model, but with all else that distinguished early New England left out. The high grade of intelligence and character, the moral earnestness, thrift, and the varied industries of those home-makers of early New England—things which supplemented a school of the humanities and helped it to make large-brained and large-souled men and women—are left behind. Before the children, in those days, got around to things worthy their Puritan mettle, like the "rule of three," the Gallic wars, or the calculus, they had risen early and applied all their intelligence and brawn to knotty problems concerning the maintenance of the family, besides "doing the chores" about the house and farm—after which these capable, intelligent, resourceful young folks were in no great need of manual training. Their sturdy self-reliance, trustworthiness, sense of responsibility, and peculiar aptness in applying what they knew to affairs were born of intelligent, purposeful effort, and gave them that knack which later made so many of them leaders of the business and intellectual life of the cities. But in our days small industries are destroyed, and the general use of cheap, ready-made products has so changed the home life that the average child takes as little heed of what he shall eat or wherewithal he shall be clothed as the raven or the lilies of the field. This summer, in an eastern town, the boys and girls of the high school habitually repaired to the post-office, at the close of school, to await the coming of the mail, and to loaf, perchance to flirt—"aye, there's the rub!"—for these were scions of New England.

These changes suggest the increasing, urgent need of handwork in school, to insure clear and masterly thinking, to develop moral earnestness and will, and to ground later activities.

In the early days there was also an inspiring and ennobling familiarity with nature—now lost to most children—that gave lessons of utilities and insight into law, and made children acute and practical. What can the town school substitute for the topography of hill, stream, and swamp, the sweep of forest and meadow, a knowledge of soils, minerals, plants, animals, and their relationships and values? It gives a day at the park, where the children must "keep off the grass," and where they "must not feed or tease" the unhappy-looking park animals that are neither wild nor tame; or a day at the museum—and blessed are the children thus privileged! Yet the museum blackbird is not the wild thing that "flutes its o-ka-lee" from the recesses of the swamp, and the environment of the museum oriole does not suggest a fruit orchard. It gives —"and pity 'tis 'tis true!"—nature lessons about the "water-dust," Mr. Wind, Mrs. Crocus, Mr. and Mrs. Crab, and other impertinent personifications that so misrepresent the nobleness and dignity of nature.

Children who understand nature, whose mills measure the force of wind and brook, and who construct machines and implements for their mimic industries, are getting much that sloyd could teach them; but these are the favored children, and they are few.

Sound pedagogy and our present conditions of living demand handwork as an organic part of our graded courses. Utilizing the natural activity of children as a mode of study is a simple solution of the problem. As to means, the kindergarten material for small workers, and more resisting, refractory materials for older ones, may be used in studying physical and mathematical conditions, geographic relief, the instruments used in arts and industries, or in realizing the scenes and characters read about. When industrial work is methodized for all grades, by an extension of the kindergarten idea of instruction, more artisans will become artists, as they did in the old days; then, also, the son of the family who can make a steam engine will be the social peer of his brother who can follow some chemist's formula and build a pill. In other words, this intelligent, joyous method of studying things, which awakens and trains practical and artistic capabilities to the point where they express themselves in useful, beautiful, and original forms, will destroy that social tyranny which now impels so many to grope restlessly after happiness in callings where they shall never find it. One thing that teachers should not forget is the truth that an impelling force, not a compelling one, develops the child.

DISCUSSION

Superintendent George Griffith, Utica, N. Y.—I find myself in a peculiar position today. For years a friend and advocate of manual training, and instrumental in securing its introduction and continuance in our system of schools, I feel constrained today to utter two protests or cautions.

First, I caution against the extravagant claims of many over-zealous advocates of manual training. It has its place and value — and important they are — but we shall gain nothing by claiming that the course of study without it has produced "contempt for rectitude and law," and that a course of study with it will obviate all the evil results now apparent in our schools.

Secondly, I protest against the common restriction of the term "self-activity" to mere physical or manual activity. "Self-activity is the law of growth," is true; but it is as true in the realms of imagination or reasoning as it is in the realms of physical activity and sense activity. To claim for manual training, or even for manual training and the kindergarten, all the possible benefits of the self-activity of the child is certainly, in my judgment, making an overclaim.

What, then, are the proper place and value of the hand in acquiring and expressing knowledge? This is made clear by a study of brain action. The division of the brain cells into sensory and motor cells, and the localization of brain functions, have taught us that the hand is most valuable as an organ of the sense of touch, as well as indispensable in the formation of motor ideas, and also has among the motor areas a large area predominantly its own, and an area capable of highest development only by its activity in expressing thought. Thus we see that the hand is *one* of the avenues to the mind and *one* of the instruments for the expression of thought.

Moreover, this brain area, with its important functions, is most capable of development while the person is young. In fact, it is doubted if it is possible completely to develop it in a person in whose youth it was neglected. Hence the importance of manual training in the lower grades as well as in the high school or in the school of technology.

Again, knowledge, to be of value, must be expressed. Manual work is often a mode of expression of thought. This develops motor areas, and tends to increase brain power along very desirable, but often neglected, lines. It tends to make doers, and not mere selfish accumulators of knowledge.

Of the influence of handwork upon the will, and hence its value as a moral invigora-

tor, I have not time to speak; nor, indeed, is this phase of its influence properly included by the wording of the subject of the paper.

In conclusion, let me say that handwork has been found universally interesting to children, that it can be used in numberless ways in connection with nearly all subjects in all grades, that we must not tie ourselves down to this alone; but, recognizing its proper place and importance, go forward with clear vision and firm faith, until in all our teaching the mind of every child is trained by the proper use of the *hand* in acquiring and expressing knowledge, as well as by the use of the eye or ear and tongue.

THE FUNCTION OF MANUAL TRAINING IN THE ELEMENTARY SCHOOL

BY RICHARD WATERMAN, CHICAGO, ILL.

The history of the manual-training movement in the United States is one of the most interesting chapters in the school history of our country. Studied carefully it will reveal some very important truths in regard to the laws of social development which are applicable to the growth of a great school system. It will show, for example, that, altho psychology says, "Manual-training should begin in the kindergarten and continue thruout each year of school life," sociology says, "The manual-training movement must begin at the top and go downward." The ideal in view must be a working ideal. It was feasible to introduce manual training into the high school twenty years ago. It was not feasible to introduce it into the first grade until public opinion had been formed, teachers had been trained, and the movement had gained some headway.

The school should develop not alone the power to think, but the power to act. Children will learn to do by doing. But further—and this is a vital consideration—the power to think clearly and correctly can be developed more quickly and more fully with the aid of the doing, i. e., of the manual training, than without its aid. An eighth-grade teacher can accomplish more work in nature study, in physiology and hygiene, in arithmetic and in language, if her pupils take two hours each week for cooking, than if they have no cooking, but give the two hours to the regular grade work.

As a result of this recognition of the significance of manual training, the movement has advanced steadily, until now, in the public schools of some cities, the course of study not only in the grammar grades, but in every grade, includes some form of constructive work, and the girls as well as boys take part in it.

In Chicago a number of manual-training experiments have been tried, and perhaps a description of some of these will be of value in discussing the function of manual training in the elementary school. First, however, let us define exactly the terms used in this title.

Function is a word denoting activity as a part of an organism. Used in this connection it implies that the school is an organism, that the manual-training department is one of the organs, and that the school cannot fully accomplish its purpose if the manual-training organ is allowed to remain inactive.

Manual training is a term that refers to both a method and a subject in the curriculum. As a method it means laboratory work, the handling of things, the use of tools, the training of the senses, the development of power thru experience. As a subject in the curriculum it means an opportunity for the pupil to enter a part of the field of human knowledge which should be studied in the school because it is important in everyday life, i. e., the investigation of scientific principles and their application in useful arts.

The public elementary school is an institution in which the state seeks to make good citizens; the place in which sixteen million American children are now studying, i. e., 98 per cent. of the entire number of pupils in the educational institution of the United States. If manual training has a function to perform in the education of every child, it must be introduced into each grade of the public elementary school.

This has been done in the Chicago public schools, not in any one building, but part here and another part there, one school emphasizing primary work and another the work of grammar grades, one giving domestic science to girls and another bench work in wood to a large number of boys. The several forms of manual training in the Chicago schools may be grouped under four heads:

1. Bench work in wood for boys in the sixth, seventh, and eighth grades.

2. Domestic science for girls in the fifth, sixth, seventh, and eighth grades.

3. Construction work for both boys and girls in the kindergarten and in the four primary grades, this constructive work being based on the regular grade work in history, in literature, and in geography.

4. Various forms of social activity, of which the use of the printing press may be chosen as typical.

I. BENCH WORK IN WOOD

In the best schools in the city this work is very carefully planned, and includes the following elements: (1) A study of the materials used and of the purpose for which each is best adapted. (2) A study of each of the wood-working tools; the materials from which it is made; how it should be cared for; how it should be used. (3) A study of the principles on which mechanical drawing is based, and practice in the use of the drawing tools. (4) Practice in planing and making a certain number of useful objects. Part of these are chosen by the teacher with direct reference to the principles to be taught, and the particular form of skill to be developed. The others are chosen by the pupil, who is thus able to apply in his own way the principles learned and the skill acquired. Together they constitute a progressive series of models that is carefully graded. Commencing with the use of soft wood, few tools, and simple exercises, the pupil advances to the use of several kinds of wood, a variety of tools, and more difficult exercises.

If a boy is asked to plan a box, he first decides what material he will use; then what the form and proportions of the box shall be; then the dimensions. These he expresses carefully in a working drawing, which must be so clear that it can be read by anybody. After he has thus formed in his own mind a clear image of what he will make, and has transferred this image to the paper, he has obtained one of the most valuable parts of the training to be derived from the making of a box.

The chief obstacle to the introduction of manual training into the public schools is the lack of competent teachers. It often happens that the wood working, for example, is intrusted to a mechanic who knows nothing about teaching, and makes no attempt to relate his work to the other parts of the course of study. This results in a fatal isolation, and leaves an opening for the critics to call manual training a "fad." The fact is that under these conditions the critics are right. A fad is a subject that is pitchforked into the curriculum without being related to anything else that the child is studying. If, instead of being completely isolated, this subject be made an organic part of the course of study, it ceases to be a fad and becomes an important factor in accomplishing the aim for which the school is established.

Another obstacle to the general introduction of manual training is the false notion that expensive equipment is needed. This is the natural result of employing mechanics instead of teachers. They work for product in material instead of in man. When we succeed in getting true teachers to take charge of this work, we shall find more emphasis given to the boy than is given to the benches and tools. The manual-training room will be provided with a simple bench and a few tools for each pupil to use in making drawings and working with various materials. The series of models will be chosen with direct reference to (1) the interest of the child, i. e., the experiences in home and school and community that give him a motive for desiring to make the objects chosen; and (2) the development of the child, i. e., the many-sided growth which the school aims to give him thru a study of the world in which he lives and the people who live in it — their habits, their customs, their industries, their everyday life.

This brings us to the second group of manual-training activities mentioned above, viz.:

II. DOMESTIC SCIENCE

The teaching of domestic science in the Chicago schools has opened up a wonderful vista of the possibilities that could be realized if the desire to make good citizens should become the controlling idea in planning the work of the public schools. A good citizen is a man who is willing and able to fulfill his obligations in the home, in the community, in society; one who cares lovingly for his family, is loyal to his government, and is ready to help his fellow-men. At the root of good citizenship is healthy, happy home life. For this reason it is of the utmost importance that the public school should aim to develop in the boys and girls a desire and an ability to commence today to make the life in their own home both healthy and happy. How can this be done?

During the past year one of the Chicago public schools has attempted to answer this question. It has established a home department, in which 250 girls in the fifth and sixth grades have spent an hour and a half each week in the study of housework, and 200 girls in the seventh and eighth grades have spent two hours each week in the study of cooking.

The equipment provided for the cooking department is planned to give every member of the class an opportunity to do individual work. The maximum number of pupils in a class is twenty-four. Each girl has her own table, equipped with the necessary cooking utensils and a gas stove. In addition there are certain things provided for the use of the entire class—a large gas range, a sink, a heater for the water boiler, a coal range, and several cupboards for supplies. The housework room is decorated and furnished in such a way as to make it very attractive and homelike. The walls are tinted a gray-green, and, as far as possible, are hung with the best pictures. The room is divided by screens into parlor, bedroom, dining-room, and kitchen, and each is provided with the appropriate furniture.

The plan followed in teaching cooking and housework is based on sound educational principles, each subject being brought into the proper relation with the other subjects taught in the school. Under the teacher of cooking the girls study the principles upon which cookery is based. For example, the effect of hot water on meats, on cereals, and on other classes of foods; and the different effect produced by cold water; the influence of dry heat and of steam on the several classes of food; the constituents of the various kinds of food, and the relative value of each for nourishment; and the physiological process by which each of these constituents is digested in the human body. Thru all of this work the grade teacher finds that in her class in nature study she is directly helped by the work done in the study of foods in the cooking room; and in her class in physiology and hygiene she is aided by the study of digestion and nutrition which the girls have made with the cooking teacher. The cost of various articles of food is also studied, with a view to determining how a large amount of nourishment may be obtained in return for a small expenditure of money. In short, the teacher uses every effort to prepare the girls to be intelligent and economical housekeepers in all of those matters which pertain to the buying of food and preparing it for the table.

A generation of public-school work along this line would do a great deal toward settling some of the grave problems which we as a nation are trying to solve today. What shall we do with the foreigners who come to us ignorant of American habits and customs? How shall we counteract the demoralizing influences of city life? What can be done to win back the girls and women whose interest centers in business or in club life instead of in the home? A home department in the public schools would help to answer these questions.

III. CONSTRUCTIVE WORK IN THE PRIMARY GRADES

The third group of manual-training activities mentioned above is that which includes the various forms of constructive work done in the kindergarten and in the primary grades, and based upon the work in history and literature.

In the kindergarten the children are interested chiefly in the home. They have been asked, therefore, to make a number of simple things — chairs, tables, piano, picture frames, etc.— for their playhouse, which, in its turn, was made for them by the eighth-grade boys.

In the first grade the children hear in its simplest form the story of Hiawatha, and they make his canoe, his bow and arrows, his wigwam, and the clothing that he wears.

In the second grade the children hear about primitive man, the simplest of human beings, living in the midst of nature. How is he to obtain food? How provide his shelter? How make the clothing that he needs? They are called upon to face some of the problems that he faced when civilization was young, and they are encouraged to make some of the simple inventions that he made in trying to solve these problems.

In the third grade the children read about Robinson Crusoe, the modern man who was obliged to live under primitive conditions; who knew what to do and how to do it, but had no tools and no helpers. He had to provide food and clothing and shelter for himself, and to make his own tools and his own weapons. The children make his island, his raft, his hut, and his tools, and many of the simple utensils that he used during his stay on the island. Again they are helped to realize (1) what are the needs of man, and (2) how these needs may be supplied even when tools and machinery and books and a multitude of men, on which we are accustomed to rely, are wholly lacking.

In the fourth grade the children continue their study of man and his needs, and in their constructive work they make from various materials, plastic and otherwise, objects which are more advanced in architecture, in decoration, in invention. Their history is the story of the city and state in which they live, and their attention is called to the industries and occupations of men who live in their own time and in their own neighborhood.

In all this constructive work the teacher is trying to develop in the mind of the child a clear image to correspond with the objects or the situation described in the class in reading or history or nature study. The child thinks in images or pictures; and if the image is clear, the though will be clear.

IV. SOCIAL ACTIVITIES

The fourth group of manual-training activities is that which includes the various forms of social activity, of which the use of the printing press may be chosen as typical. There is a considerable number of public schools in Chicago where the printing press is used daily by the pupils. A few trustworthy boys are put in charge of this work, and are allowed to spend in the press-room a part of the time that would otherwise be given to language and to manual training. They are given the assistance of as many helpers as are needed for the mechanical part of the work. The typesetting and proofreading give a most excellent opportunity for training in spelling, punctuation, and paragraphing, and the various forms of grammatical construction. They also give constant practice in the correct use of the English language.

The lower-grade children are led to formulate in their own way the story that is told in the class, and this story is then printed on the school press and used as reading matter by each pupil. The new words the children learn are first written on the board and then printed in large type on sheets of paper. Each pupil is given a sheet, and he cuts out the words and pastes them into a blank book, which he has previously made for the purpose. He places together all the words beginning with the same letter, and thus builds up his own dictionary just as fast as he can learn the words.

In any grade where the teacher desires to place a beautiful poem or a choice prose selection in the hands of each pupil she has the necessary number of copies reproduced on the school press. After the members of her class have used the sheets, they are collected and placed in the school library as a permanent addition to the supplementary reading for use thruout the school.

It is also possible for the school which owns a press to publish a school paper, containing some of the best compositions written by the pupils; news items in regard to the school and its work; lists of additions to the museum, the library, and the school equipment; and any other topics that would interest pupils and teachers and parents, and would serve to promote the institutional life of the school.

Used in this way the printing press becomes a very important factor in the school work. The opportunity it offers for manual training is considerable, and this, together with the opportunity for developing the child's mental power as well as his moral nature, makes the press an almost indispensable part of the equipment of a large elementary school.

So much for the manual-training work that is now being done in one or another of the public schools of Chicago. The interest in these forms of manual training is growing rapidly, and it is safe to predict that before many years these and other forms will be introduced very generally thruout the Chicago system. This will mean certain radical changes in the present course of study and in the present methods of teaching. What is the force that will bring about these changes? It is twofold: (1) There must be a few great elementary schools whose work is controlled and directed by the spirit of the new education; and (2) there must be a strong public opinion that will sustain these type schools in their pioneer work and will support the school board in its efforts to extend the influence of these institutions to all parts of the public-school system.

SOCIAL CO-OPERATION

BY B. C. GREGORY, SUPERVISOR OF SCHOOLS, TRENTON, N. J.

For several years I have given thoughtful attention to the question: "How shall the kindergarten principle be applied to kindergarten instruction?" A word concerning the general subject may make clearer the special application I have to make, which might otherwise be regarded as inconsequential.

The happy results which have followed the introduction of the kindergarten into the public-school system have induced those who have control of school affairs to extend its influence into the grades beyond the kindergarten, or sub-primary, stage of education. These attempts, too often, consisted merely in supplying such grades with kindergarten material to be used in the work of the curriculum. The results have been unsatisfactory. The kindergarten material is used aimlessly. Its purpose has not been apprehended by the teacher, and much time and money have been frittered away in consequence. The teacher, conscious of her lack of knowledge concerning the rationale of the kindergarten material sometimes resists its introduction, accepting it only when compelled to do so. From this state of things has been evolved an unreasoning and unreasonable opinion of the kindergarten.

Such efforts are irrational and doomed to failure. There is no logical connection between the apparatus of the kindergarten and the purposes of the ordinary school. In introducing the kindergarten material, little effort has been made to ascertain what are the principles of which it is the expression. Froebel, it must be remembered, not only bequeathed to us an apparatus, but also a philosophy of education, of which this apparatus is the expression as regards only one stage of education. It does not follow, because such apparatus is the appropriate expression of the philosophy at this early stage, that the same apparatus should be its expression at a later stage. To illustrate: the habit of observing the mode of life and characteristics of living creatures may be cultivated in the kindergarten by a game in which children personate birds, etc., but it does not follow that this habit is to be inculcated in the grammar and high schools by the use of such a game. Such an absurd course of procedure is duplicated whenever the kindergarten apparatus or methods are used without regard to their philosophical meaning. The logical mode of inquiry would seem to be this: given a principle, what is the proper method of applying it in the education of children of a given age? It would be found that for children of the kindergarten age the kindergarten apparatus offers the best possible medium of application; for children in the second year in school another method of application must be sought, and for children in higher grades yet other methods, the principle remaining always the same. Froebel's philosophy, not Froebel's apparatus, is the essential consideration in his system of instruction.

Froebel's definition of education at the very outset of his discussion illustrates my meaning and bears directly on the topic I am to discuss. Two adjectives are prominent in this definition. The development of the child must be "conscious" and "free."

The two requirements are very closely related and very germane to the present discussion. Children are individuals. The divine endowment is not the same in two different children. It varies greatly, but in the eyes of many a teacher there are no differences. All children must take exactly the same amount of arithmetic, the same amount of drawing, the same amount of music, and the individual peculiarities of the child have nothing to do with the case. To be sure, we do not treat horses in this way. In their training the individuality of each animal is carefully considered. But in our schools it is of no consequence whether the child is to develop into an Edison, a Mozart, or a Napoleon; the treatment is precisely the same in all cases. It goes without saying that such rough and unintelligent training must unduly stimulate certain sides of the nature and unduly repress other sides in the case of every child.

The adjective "conscious" is, however, the most interesting point in the definition. Froebel demands that the child shall be made conscious of his divine possibilities. We are to note that not only is the teacher to know what the child can do, but the child is to know what he can do himself. We note, also, that the definition does not say that the child is to be made conscious of the evil side of his nature. The language of the definition is "a conscious representation of the divine unity." A consideration of the methods employed by a great many teachers will reveal the fact that to make the child conscious of the evil rather than the good in his nature is precisely what the teacher effects. She is constantly endeavoring to make the child conscious of what he cannot do, or of what he is doing that is wrong. In the discipline of the class, the child is told very promptly if he disobeys a rule — if he whispers, for example, or if he is inattentive; but the teacher too often does not take pains to tell him that he did not whisper during that recitation, or that he was very attentive, and that he deserves great commendation, etc. The rules of the school mostly begin with the word "don't." The child's attention is always directed toward what he must not do, and the evil things that he does do; he is not made conscious of the successes he attains, of how much he resists temptation, and how excellent his effort has been to do what is demanded in the school. The same thing is true as regards the curriculum. The teacher goes thru her compositions with a blue pencil and laboriously indicates all the errors, and when she hands the composition back to the child, she has succeeded in showing him what he cannot do. Why make him thus conscious of his weaknesses? Let us assume a new use for the blue pencil. Let it serve to mark the excellences. We may suppose, for instance, that the teacher is endeavoring to inculcate the principle that every sentence should end with a period. Suppose she marks with a blue pencil every sentence that does end with a period and by that process makes the child conscious of attainment. Is it a doubtful proposition that a pupil so treated will generally try to do better work next time? The paper bristles with commendation; every blue mark is an encouragement. The child is conscious of power.

We repeat that this course of procedure is the reverse of that followed by most teachers. They commend, of course; some commend not a little; but the teachers are few in number who seek for opportunity to commend, who make their principal criticism commendation. Such a course on the part of the teacher means, on the part of the child, consciousness of strength, and consciousness results in development. The matter is very easily illustrated in discipline. Suppose we assume a fight in the school yard. The culprits are brought before the teacher. Fighting has been forbidden. It is, probably, just the worst thing, in the opinion of the teacher, the children can do, and, no matter how the fight commenced, there is a standing rule that there must be no fighting; and both of the children are punished, perhaps one more than another, as one is a trifle more guilty than the other. But let us conceive a reason for the quarrel, which, altho extreme, may serve to make the teaching clear that we have in mind. Suppose, as in the case of young Oliver Twist in his memorable fight with Noah Claypole, the boy had maligned the memory of a dead mother. Here is a dilemma presented to the teacher. On the one hand, it was wrong to fight. On the other hand, it was honorable to hold sacred the memory of the mother. Shall the teacher ignore the better side of the nature, developed even in such an unpleasant incident, and deal only with the wrong side of character? Which feeling shall the teacher leave more prominent in the child's mind, the feeling of shame or that of self-respect? Shall the teacher say: "Fighting is wrong, and it makes no difference what the reason was, I shall punish you, and I shall expel you if you do it again;"or shall she say: "Fighting is wrong, and I am very sorry that you have engaged in a quarrel with one of your schoolmates, but I honor you for holding in reverence the memory of your mother. A boy that can thus hold sacred a mother's memory cannot go very far wrong. We will postpone the further consideration of the fight until tomorrow"? I fancy, as a teacher of some experience, that the quarrel could be approached by both teacher and pupil the next day with the prospects of more permanent results than if the quarrel alone had been considered. If the teacher grasps this thought, that her business is not to make her pupil conscious of his weakness, of what he cannot do, of his tendency to evil, but to make him conscious of his possibilities, conscious of what is hopeful in his nature; if her gospel is not discouraging, but inspiring, she has changed her whole outlook on the field of education, and her whole course of procedure must be modified in view of such a change.

The present subject of social co-ordination is a fair illustration of the method of applying a kindergarten principle. The principle of co-operation runs thru the whole kindergarten system. The children work together, they combine to produce certain results, to evolve certain products; they unite in the playing of games. Co-operation is not the only characteristic of play, but it is a most important one. No game that can be played alone is of any importance in the kindergarten. In every game each participant contributes something, and without the sum of these contributions the game would not be possible. Later in the evolution of this idea of co-operation the notion of community is reached, which immediately brings us, as Froebel would have us believe, into the presence of the two conceptions, religion and the Deity.

Now, here is a principle; evidently co-operation is necessary, at least in the kindergarten. What is its application to the elementary school, not the primary school alone, the grammar school also? Let us ask a preliminary question: What is the genius of the elementary school at the present time as regards this desideratum? There must be as many answers to this question as there are schools. In looking over the whole field, however, I may be pessimistic, but I cannot resist the impression that in far too many schools, and to far too great an extent in many other schools, the governing principle is not co-operation, but segregation, isolation. Perhaps I can best support my position and indicate the application of the kindergarten principle of co-operation by calling attention to some of its violations.

The most obvious example of such a violation is found in the prevalence of the counter-principle of rivalry. It is everywhere present in school management. We all use it more or less, because it supplies a kind of stimulus which seems, to us, essential in getting "results." But rivalry is essentially a segregating principle.

Do you remember the little poem of Whittier's that we used to parse? It begins:

Still sits the schoolhouse by the road,
 A ragged beggar sunning.

You remember the story. You remember the match in school, the little boy defeated and glooming outside the schoolhouse when all is over. You remember the sweet expostulation of the little girl:

I hate to go above you,
Because, you know, I love you.

Now, I have nothing to do with the sentiment of the story, but one teaching surely lies on its face, and that is that rivalry and love are incompatible. You can have one or the other; you cannot have both. It is not necessary to assume the presence of love as a prime consideration in the social relations of the school. Don't call it love, if you object to this term; call it friendship or call it only "class tone": the principle remains the same. By whatever name you call the genius of social amity, it is antagonistic to rivalry; one or the other must die.

Now, I am far from saying that rivalry has no place in the schoolroom; I don't know; I wish I did. My feeling is against it. But this much seems clear: that the teacher must choose between that principle and love, kindly fellow-feeling, social co-operation.

If, ignoring this obvious principle, we emphasize comparisons of child with child, with reflections on the unsuccessful pupil who has fallen behind a brighter pupil, but has done wonders when we consider what was to be expected of him, we are creating a caste of scholarship which must work out the inevitable fruits of caste. I say again that the results of our comparisons, whether by per cent. or descriptive letter, may not always be apparent; the vicious principle, however, is always present and is insidiously working its malign results.

Lurking in the ranking system is a correlated evil often forgotten, but serious in its relation to the subject we are considering. The teacher comes to rely on the stimuli supplied by the ranking system and fails to attach importance to the love of knowledge or to the pleasure of intellectual activity. She does not seek to bring about a union of sympathies, the ascendance of the principle of solidarity. Her system is opposed to solidarity. The good of one is not the good of all. The good that is attained in the ranking system can be obtained only by the misfortune of someone else. That one must gain, others must lose. This principle is thoroly worked out in practical life, but even there it does not work for social co-operation, as our sad social relations testify. One gets richer as his brother gets poorer, but the brothers are not usually drawn nearer together in the process.

I am very fond of a stanza in one of Bryant's hymns:

We lean on others as we walk
  Life's devious path with pitfalls strewn,
And 'twere an idle boast to talk
  Of treading that dark path alone.

I call your attention to the fact that Bryant's conception is not realized where the law of social co-operation does not, at least unconsciously, hold. Primarily the teacher is responsible, and if the keynote of her administration is that fatal word "discipline," she will never get the desired social condition. The atmosphere of her class-room will be more or less depressing. There will be little concurrence, enthusiastic or unenthusiastic, among the pupils.

The secret of success in this matter has been charmingly expressed by Froebel in a couple of paragraphs which have not received the attention at the hands of teachers of post-kindergarten grades that they deserve. He says: "The child has an intuitive insight which enables him instantly to determine whether what the teacher demands is expressed as an arbitrary command or as an unavoidable necessity to which both teacher and pupil are alike subject." Still more beautifully he alludes to the presence of what he calls "the third something." This is a rather vague expression, and yet I have never found anything I like better. The first "something" is the teacher, the second the pupil, the third the relation. If the third something is present, if the pupil sees in the command of the teacher only the formulation of an eternally true and divine law, there is no obedience, there is only acceptance.

This is the divine method and applies to every divine command. "Whatsoever ye would that men should do to you, do ye even so to them," is not obligatory because Christ said it. It would be equally true if Plato or George Washington had said it. The fact is, it is true because it is true; and the Great Teacher has merely formulated it for us. That is why "his commandments are not grievous."

Now, here is Froebel's conception of the ideal class-room. Its adoption instantly brings about co-operation among pupils, and excludes rivalries and antagonisms. The teacher must choose between the two atmospheres in determining the method of her administration. She brings about social co-operation by her own attitude.

If you will allow me to compare small things with great, I may allude reverently to the expression of this law in the divine volume, and in doing so I but follow my great German leader, who is ever making the class-room the crystallization of the divine unity. "He that loveth not his brother whom he hath seen, how can he love God whom he hath not seen?" And again: "That he that loveth God should love his brother also." Do you not see the same thought? Our relation to the leader and our relation to each other are correlative. If one is at fault, the other must be. So is it between teacher and class.

Nor is this merely a question of morals or order in the class-room, as might be hastily assumed. Froebel is always reminding us that the highest results in education are only possible when the pupils are in conscious accord with the divine plan, or, as he expresses it, with the divine unity. Only with this accord are possible the self-activity and self-revelation which are the keynotes of the Froebelian conception of education, for only when the teacher's commands are in accord with eternal truth are they self-evident, and only then is "the third something" present.

May I now, by way of emphasizing my thought, ask you to notice two rather curious, but everyday expressions of the inborn social impulse in the natures of children? They show how dull we are to recognize the divine spark, and how we crush and extinguish that spark which might be easily fanned into a flame. The expressions I refer to are found in the two habits of prompting and concealing the wrong-doings of schoolmates.

I have seen few teachers who did not consider it their duty utterly to extirpate the vice of prompting by any means in their power. The practice was wrong and wicked, and they never failed to set it in that light before their children. Did you ever notice how hard it is to make converts to this article of our creed? The best of children will go on prompting. Why? Simply because the action is not wicked. Considered fairly, the act of prompting is noble, praiseworthy. It is the effort of one pupil, at considerable risk to himself, to help another pupil in distress. Children will often prompt their rivals who are struggling for the same medal as themselves. I have a contempt for a boy who naturally does not wish to prompt another, and the general consensus of opinion in all classes of normally constituted pupils regarding such a boy is that of strong disapprobation. I grant that prompting is unwise and injures the person prompted, and that the practice should be abrogated, but not by stifling the spirit of chivalry in the child who prompts; not by punishing him and thereby forcing him to be selfish.

How would a boy look at you if he were brought into your presence for prompting and you should address him thus: "My boy, it was very kind of you to help John by prompting; I was sorry for him myself, and wanted to help him. I honor you for your spirit. Help the man that is down every time, but help him in the best way. I think your way was not the best that time. If he knew he could get your help all the time, he wouldn't study at all, and in the end would he not be in a very bad way, and would you not have done him a fatal injury?" etc.?

I have enlarged on this habit merely to show that we not only do not develop the social idea in our class-rooms, but that we fail to recognize its symptoms and stifle tendencies toward the ideal.

I need say little concerning the other habit, that of concealment. There are some teachers so utterly blind to the importance of social co-operation that they encourage tattling. This is amazing. Others do not go so far, but they reprobate concealment, and there are few of us who do not, at least, accept information brought to us, and who discourage its bringing. There was a time when I considered it a very high attainment, indeed, to be able to ferret out offenders by means of a skillful use of pupils' willing or unwilling testimony. Alas, we must all do something of this kind, for we are not yet in an ideal state. But, granting this necessity, is it not possible to keep the ideal in view and deprecate the use of means we should loathe? For is not the desire to shield our fellow from the consequences of his misdoings a divinely implanted impulse, and is not the desire to deliver the culprit to punishment, except as an official act, the desire to play the rôle of the informer, fiendish? Is it not possible to recognize the noble, the chivalrous in the annoying and obstructive acts of our pupils, and, by a wise manipulation of their motives, lift them into higher living? We cannot reach the ideal, but constant pressure toward it will surely change our conditions.

I have pasted on my desk at my office, right in front of me, this quotation, from George Eliot: "Failure, after long perseverance, is better than never to have had a striving worthy of the name of failure." How often and how sadly I have had to apply that consolation to myself during my own career. How often must every man look to such a source of comfort when "he has but tears to give and must weep those tears alone." And to the pupil the recognition of the God-like striving is as grateful as to you and to me. The striving, not the failure, is the thing which must engage the teacher's attention.

I will not close without making a brief allusion to Froebel's two prominent considerations in the *Education of Man*—play and rhythm. I fancy that, if Inspector Hughes had been here, he would have made much of play, and he would have rendered us a good service by so doing. I have not time to discuss it. The work of the class-room may take the shape of games more frequently than we think. Debates may stand as an illustration. A little planning will give to a serious lesson all the charm of the playground, and will develop that characteristic of play, the subordination of everyone's effort to a common purpose, thus preparing for the discipline of life, as Mr. Hughes so well knows how to demonstrate.

Regarding rhythm, a word concerning music may be in place. Music is essentially a co-operation subject. A teacher may throw away its advantages. She may have the pupils sing a song just to keep them from disorder while she is giving out the pens, and may not notice that their singing is perfunctory and unenthusiastic. Many teachers do this. But many teachers have not yet heard of co-operation.

If all sing even in unison, all must at least sing. But in part singing the highest pleasure is felt. There is a distinct sense of co-operation in part singing. You feel that your neighbor who is singing another part is essential to your singing. If he stops, you may as well stop, for the chord is broken and the pleasure is gone.

To me co-operation is fundamental. It goes far down to the roots of things and relates to the conditions on which education must be founded, to the postulates of education. Before I studied German I knew a young lady, a member of a German singing society, known as the Eintracht. I asked her what the word *Eintracht* meant. She said she didn't know the English word for it, but it meant that they would "all stick together." That is my conception of school; and as to the teacher in his relation to this ideal, let us remember that Froebel did not say, as some teachers think, "Let us live in front of the children," but, "Let us live with the children."

DEPARTMENT OF SECONDARY EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—FRIDAY AFTERNOON, JULY 8, 1898

The department met in the Central High School assembly hall, with President George B. Aiton, of Minnesota, in the chair. In the absence of Secretary E. G. Cooley, Mr Ralph R. Upton, of Chillicothe, O., was elected assistant secretary.

The following program was presented:

1. "English the Core of a Secondary Course," John C. Hanna, High School, Columbus, O.
2. The presentation and defense of three printed syllabi for literature and composition-rhetoric in secondary schools, with a statement of the principles of choice and arrangement followed in the preparation of each, by Samuel Thurber, master in Girls' High School, Boston, Mass.; Miss Charity Dye, department of literature, Central High School, Indianapolis, Ind.; W. F. Webster, principal of the East Side High School, Minneapolis, Minn.
3. General discussion.

The president appointed the following nominating committee:

A. F. Nightingale, Chicago, Ill.
Edward F. Hermanns, Denver, Colo.
Fred W. Atkinson, Springfield, Mass.

SECOND SESSION.—TUESDAY AFTERNOON, JULY 12

The report of the nominating committee was given as follows:

We, the undersigned, the Committee on Nominations, beg leave to submit and report the following names in nomination for the three offices of the department. Mr. Hermanns was not in attendance at this committee meeting. The nominations are as follows:

For *President*—Edward F. Hermanns, Denver, Colo.
For *Vice-President*—W. F. Webster, Minneapolis, Minn.
For *Secretary*—Ralph R. Upton, Chillicothe, O.

Very respectfully,
A. F. NIGHTINGALE,
FRED W. ATKINSON,
Committee.

On motion, the report was accepted, and the secretary was directed to cast the vote of the department for the nominees.

The vote was so cast, and the nominees declared elected.

Mr. Plummer, Des Moines, Ia., offered the following resolutions, which were carried:

WHEREAS, Three strong, carefully prepared, complete syllabi on the subject of "Literature and Composition-Rhetoric in Secondary Schools" were presented before the Section of Secondary Education Friday afternoon, July 8; and,

WHEREAS, It is the sense of this department that the influence of these valuable papers should be extended as widely as possible among teachers of English; be it

Resolved, That the chair appoint a committee of three, whose duties it shall be to devise means of securing the publication of these syllabi, and the papers which supported them, in full, in a neat pamphlet, and to secure their distribution, and to report action, if any, to the next annual session of this department.

The chair appointed:

Frank E. Plummer, *chairman*, Des Moines, Ia.
Charles C. Ramsay, Fall River, Mass.
Ernest R. Clark, Colorado Springs, Colo.

Resolutions of thanks were tendered Colonel Henry F. Blount, Dr. F. R. Lane, Miss H. M. Reynolds, and others for the cordial welcome which the department had received.

Mr. Edward F. Hermanns, president-elect, assumed the duties of his office.

On motion of Mr. Aiton, the president was requested to set the example of opening next year's session with a brief résumé of the year's progress in secondary education.

The department then adjourned, concluding its proceedings in round tables as follows:

1. "Composition-Rhetoric"—Leader, Ernest R. Clark, Instructor in English, Colorado Springs, Colo.
2. "History"—Leader, J. J. Shepard, Boys' High School, New York.
3. "The High School as a Social Factor"—Leader, Charles H. Keyes, Principal of High School, Holyoke, Mass.

RALPH R. UPTON,
Assistant Secretary.

PAPERS AND DISCUSSIONS

ENGLISH THE CORE OF A SECONDARY COURSE

BY JOHN CALVIN HANNA, EAST HIGH SCHOOL, COLUMBUS, O.

The problem whether there is a place for secondary instruction is settled by the laws of nature. "The secondary epoch is due to the phenomena of adolescence." These are the words of Professor Nicholas Murray Butler in a valuable article in the June number of the *Educational Review* on "The Scope and Function of Secondary Education." The essential characteristics of secondary-school studies there enumerated are selected upon sound principles, and do much to clear the way in the problem of curriculum-making—the second of the two great problems connected with secondary schools.

In the attempt to solve this problem, the strife between extremists has gone to such lengths that there is a reaction coming. The most thoughtful and the broadest-minded workers in this field are coming to the conclusion that a sane and harmonious working basis can be established, and that in the establishment of such a basis these ideas must have a controlling force:

1. That many subjects must be omitted entirely; that, for example, the formal study of psychology and allied subjects, of the advanced mathematics, of technical arts and sciences, of astronomy, geology, etc., of mechanical trades, and of many other subjects, belongs *not* in the secondary school, but in special schools of various kinds, or in the colleges and universities.

2. That there must be, even in the secondary school, a recognition of various needs in the establishment of different courses.

3. That there must be a considerable degree of flexibility and a large choice of electives allowed, and that the college-entrance requirements must be changed to harmonize with this idea—all within reasonable limits.

4. That not too many subjects—four or, *at the most*, five—must be pursued at one time, and that each subject must be pursued long enough to get some good out of it, preferably in no case less than a full school year.

5. That there must be an immovable center belonging to all courses and governing the whole matter of electives. Professor Butler says that there ought to be three general elements in this fixed center, viz.: (*a*) the study of language; (*b*) the study of deductive reasoning, as illustrated in mathematics; (*c*) the study of inductive method, as in experimental science and, in part, in history. Beyond these limitations the student should be free in selecting his course. In support of this position he points to the fact that too much uniformity in the German gymnasia has brought about what Bismarck himself calls "the educated proletariat." I will quote one sentence which applies to our own institutions most forcibly this thought: "Democracy needs intelligent and trained leadership—leadership in public policy, leadership in industry, in commerce, in finance; leadership in art and in letters. The basis of training for leadership is laid in the secondary schools, where the directive capacity of the nation is serving its apprenticeship."

I accept all that he gives, and I believe the consensus of secondary-school people will support it.

In presenting for my thesis "English as the Core of a Secondary Course," I claim that there should be a systematic and thoro study of English during the entire four years of the ordinary secondary course, and, whatever is done in the way of foreign-language study—and I believe heartily in its educational value—that, even tho the required mathematics be limited to two years, which is enough, and altho the required science and required history be limited to one year each—all the rest of the work in both these departments being elective—nevertheless, the study of English should be required of all pupils for four years, and that it should be systematic and thoro.

This will make English the "core of the secondary course," and, in my judgment, it will furnish a common ground of agreement, of honorable compromise, and of harmonious co-operation on the part of the special advocates of all the different departments of study. Here we can all meet, the specialist in classics, in modern language, in natural science, in mathematics, in history and civics.

The practical value of language study cannot be overestimated. The fixed laws of thought presented to us in the study of mathematics are absolutely necessary for our training to logical methods. But the practical problems of life are mainly of a different character. The human element is in nearly all of them. In law and legislation, in history and politics, in art and literature, in business, in society and religious matters, the problems which come to us for solution are solved better by him who is trained properly thru a study of language, for its rules are not, as those of mathematics are, fixed and iron-clad, but are full of exceptions, produced by the great element of humanity which has grown into all language, as it has into law and art, and business and society.

For its immediate helpfulness in relation to all other fields of study and activity the study of our own language is of paramount importance. The relation between clearness of thought and clearness of expression is often a reciprocal one, and this fact is overlooked, sometimes, by teachers in all departments of study.

There is no field of study where "laboratory" work may be more helpfully carried on than in language study, and the material for such work in this department is as easily accessible as in any other, and, usually, much the easiest of access, and the most abundant.

The May number of *Education* contains an "Address to Teachers of English," by Samuel Thurber, which is full of sensible and practical suggestions. He makes his deductions from two axioms, which are these: (1) the child acquires language only thru unconscious absorption, not at all thru efforts to commit linguistic principles to memory, and (2) he acquires it as a whole, as the entire expression of a thought, not piecemeal, and not by analysis.

He then maintains that, in order to this absorption, two conditions are essential:

1. You must give the pupil an abundance of English to absorb.
2. You must bring him into a receptive frame of mind.

To the statement of the latter condition he adds the following, which is full of truth, and yet is much neglected: "For the last (i. e., the receptive frame of mind) he must be interested, and that which interests him in language is by no means the form and structure of the language itself, but what the language says—its content."

If this be true—and who will dispute it?—then the instructor in English who knows his business has a vast advantage over the instructors in some other portions of secondary education, because the "interest" may always be aroused. The field of selection is practically limitless, and it is always possible to find something for study whose subject-matter will command the interest of any sound mind. This, of course, means that a teacher of English need *never* be overwhelmed by the painful discovery that his pupils are not interested in the matter of the study. It also means that a subject of this sort ought never to be laid aside, or thrust aside, but ought to stand in the front and in the center and at the top, and ought to set the pace and point the way for all other work in the school.

One practical suggestion of my own here which I believe in, and which I will give for what it is worth. It is based on class-room experience of several years in the East High School of Columbus.

The help that comes from the interest that may be aroused in the subject-matter is readily made available in all matter of *reading*—the first of the two halves of this English work in secondary schools; but, especially in the lower classes, it is practically more difficult to utilize this help in the second of the two halves of the English work, namely, in the matter of *expression*. And right here I wish to emphasize the thought in Professor Denny's excellent paper on "English Requirements," presented before the North Central Association of Colleges and Preparatory Schools, at Chicago, in April last. He says: "Too many schools are assuming that, if we only provide enough good reading, the power of expression will come, somehow, of itself. We might trust the silent influence of good reading to make good writers, if we had forty years at our disposal instead of four. The most difficult part of school work, the part which needs the most careful supervision and unremitting attention, we leave the most to chance."

Now, in the matter of expression, practice is essential to any degree of success, and the practice will be comparatively unfruitful unless the interest is aroused and maintained in the subject-matter. Of course, very many kinds of subject-matter may be *made* interesting by a skillful teacher in course of time; but, at first, with young and immature minds, to whom little as yet is interesting in literature, what shall be done?

Better, for this particular crisis, than the prose-paraphrase plan or the rewriting-in-your-own-words-of-a-masterpiece plan, or the describing of a scene or a character in a poem just read, or the tell-what-you-saw-on-your-way-to-school plan, we have found by experience to be the use of Greek myths. These myths, if properly presented, are delightful and of absorbing interest to the pupils of the ninth grade, and the form vanishes from their conscious vision while the subject-matter fills their horizon; and, if skillfully and faithfully handled, the expression comes spontaneously, and only the restraining and guiding hand is needed, instead of the coaxing and pumping that go so frequently with the work of that year. I will not dwell further on this method, but those who have given it a fair trial and are willing to work stand firmly by it.

The patriotic effect of the continuous, zealous, and enthusiastic teaching of English is not to be ignored. Let me quote again to illustrate this. Another paper presented before the North Central Conference was by Dean Charles H. Thurber of Morgan Park Academy. It contains this paragraph: "The most striking fact of the nineteenth century is the rise of great nations. Hand in hand with this development of political power has grown the spirit of nationality, and, as a consequence, in every civilized country there has been, within a very few years, a great increase in the interest paid to the teaching and study of the vernacular. There was no question more important before the great school conference at Berlin in 1890 than that of the teaching of German. The German emperor, in addressing the meeting, said: 'We wish to educate young Germans, not young Greeks or Romans.' One of the great results of the conference was an increased allowance of time in all German higher schools to the study of the German language. Schools can make no mistake in emphasizing the importance of the study of the native tongue. The people will stand by the schools in every reasonable means to this end."

I wish, modestly, but no less emphatically, and, I am almost willing to say, fiercely, to second all that is said in that paper about the present college-entrance requirements in English. Let us do away entirely with the "narrow, prescribed list of books." In Mr. Thurber's opinion, "some of the books specified are not by any means acceptable. It would be, indeed, difficult," says he, "in the judgment of many schoolmen, to pick out books more unsuitable for use in secondary schools than some of those laid down in the college-entrance requirements. The only reasonable principle upon which they could have been selected is that no one would ever read them unless forced to; consequently, if the books are not to disappear from the known body of literature, the children must be forced to read them in school. There is no more human kindness in compelling a high-school boy or girl to read the horrors of the plague of London than there is to force him or her to a minute study of cancers as a product of over-indulgence in alcoholics. Yet both are being done in our high schools at this moment." (Thank fortune, some of us are philistines enough to refuse to wear this harness!)

Will not this body do something to further this suggestion of his that we shall have an open list, i. e., a list of, say, fifty or one hundred books, from which the instructors may select the books best suited to their own taste and training, and to the ability and tastes of their pupils? Let us get rid of *Palamon and Arcite*, *The Flight of a Tartar Tribe*, *The Plague in London*, *The Vicar of Wakefield*, and Pope's translation of the *Iliad*.

If you want the *Iliad*, must you have Pope, when there are Lang and Bryant and Church? If you want Pope himself, why take his stilted, un-Homeric translation of the *Iliad* rather than something else of his? Why take him at all? Then why *Macbeth* alone for five years? Let us have the open list!

The placing of English as the core of the secondary course will not do any injustice to any of the other essential parts of that course, whether mathematics, foreign language, natural science, or history.

A secondary course might be formed with sixteen year-units—four years with four studies each year; then let English occupy four units, history one unit, Latin four units, mathematics two units, natural science one unit — total, twelve units of fixed work ; and, in addition, four units of elective work, to be taken from the following : German or French, Greek, mathematics, natural science, and history — a grand total of sixteen units. A modification of this course, with the modern language substituted for the ancient, ought to make it possible thus to satisfy everybody in the secondary schools. The colleges, moreover, ought to accept for proper courses any pupils who have satisfactorily completed that course, with whatever elective.

The thing which ought to harmonize all factions and unite all specialists is this placing of English in the chief position.

Mr. Thurber's collection of opinions from business men on this subject is immensely interesting and instructive, for it shows how they value the power of expression as a qualification for business. "A working mastery of English," so he sums it up, "is everywhere regarded as of the greatest importance and utility for practical life."

President Eliot has expressed it thus : "The power to understand rightly and to use critically the mother-tongue is the flower of all education."

No line of studies can be more practical. Nothing can be more closely related to all other studies. Nothing can be made more interesting and instructive. The power of the subject-matter can nowhere else be made so efficient a help. In no field is there room for more extended research ; in none greater reward for labor expended. Here may laboratory methods be easily and successfully applied with an abundance of accessible material. Nothing is more entirely indispensable. Nothing more truly needs a continuous study for a term of years. Nothing adapts itself more surely to the natural development of the pupil.

This arrangement is no loss to the supporter of the natural sciences, for extreme claims in that direction are sure to react and to fail in the long run. Professor Coulter is already pointing out to us that the laboratory method in science work in secondary schools must pass away.

This is no loss to supporters of the humanities, for the relation between art, history, language, and literature is so close and so vital that the study of our own language, which is the most practical of the practical studies, can only give help to the study of the classics, for at the same time it is the most refining of the studies that refine and the most life-giving of the studies that give life.

Can we not all, of whatever faith otherwise, unite on this one platform ?

1. English a required study every year thruout the first eight years.
2. English a required study for every course and pupil thruout every year of the secondary course.

3. English, in its grammar, history, composition, rhetoric, literature, the core and backbone of all courses of study in all grades, and particularly in the secondary schools; the center about which, in due proportion and with no extravagance and no bias, and with a reasonable array and breadth of electives, all other studies shall be arranged, and all demands, both of college and of life without the college, may be fully met.

SOME OF THE MAIN PRINCIPLES OF SECONDARY ENGLISH TEACHING

BY SAMUEL THURBER, GIRLS' HIGH SCHOOL, BOSTON, MASS.

1. In a scheme of English study, carried out in minute detail, and tabulated according to years and subjects, a teacher may exhibit his own actual or ideal practice; but if he publishes this scheme as a method, he invites imitation, and so does harm. No good teaching is likely to be done under a prescribed plan of work. Unity of spirit and aim is desirable; but uniformity in procedures is worthless. There is no need that the teachers in a large school, or in a city system, should follow the same model, or follow any model at all. The first thing a superintendent should learn should be to repress the leveling instinct. He should acquaint himself with teachers' work by inspecting it, and should influence this work by prompting motives, and by instilling respect for good principles. In playing the simple rôle of adviser, I shall follow out this conviction, trying only to lay down a few maxims of English teaching, and to make a few of the most obvious applications of these.

2. In this attempt to establish principles and apply them to practice, only those schools will be considered which are free to plan in harmony with real needs. Real needs are determined by the facts of human nature, and by the nature of the subject taught. Exactions imposed from without — such as the entrance requirements of the colleges — introduce into education a species of need that may properly be described as unreal, since it is not determined by essential principles, but by the arbitrary action of persons.

3. English study in the secondary schools at once divides itself into three parts:

(*a*) Training in the use of language.
(*b*) The study of English literature.
(*c*) The scientific study of the English language.

It must not be supposed, however, that these divisions can, in practice, be kept apart either in time or in function. Like most attempts at analysis, such an arrangement of elements serves chiefly to guide the ordering of a syllabus.

The principles that seem fundamental to the training of youths in the use of their own tongue are these:

4. Language is acquired only by absorption from contact with an environment in which language is in perpetual use. Utterly futile is the attempt to give a child or a youth language by making him learn something about language. No language is learned except as it performs the function of all speech — to convey thought — and this thought must be welcome, and interesting, and clear. There is no time in the high-school course when language will be learned in any other way.

5. The youth absorbs only when his interest is roused. His interest is roused at first chiefly thru his emotional nature. A purely intellectual curiosity comes gradually more and more into play. Moral questions and æsthetic themes then begin to appeal to his mind. In full adolescence the youth gathers and appropriates, to a degree determined by the extent of his natural powers and the felicity of his place in society, from all the ranges of human interest.

6. Hence the great consideration in teaching the mother-tongue is to provide an environment from which the speech may be absorbed. Where this environment is already perfect in the home and in society, the school has but little left to do. But the perfect environment rarely exists. The school must do what it can. The influences that go to make the speech of a youth are innumerable, and the school can but add its quota to the multitude. Yet the school will contribute far more good elements to the speech environment of the youth when it sees clearly what to do and what not to do.

7. Language is thus learned unconsciously. The preservation of this linguistic unconsciousness for the longest possible time is all-important. Supply matter for thought and emotion, awaken curiosity about things that men have always been inquisitive about, and language will take care of itself, because thought and speech are inseparable, and the youth is eager to receive knowledge and hear stories, and can possibly get thoughts and fancies only thru language, which therefore he learns incidentally to the matter of his interest. This learning of language is sure to go on without the least concern for it on the part of the teacher. All the teacher can do for it — tho this is a great deal — is to secure an environment of abundant intellectual and emotional interest. The sources of such interest are infinite in number, and crowd upon the teacher who really wants them.

8. To offer a negation: manuals of exercises in language that tell no story and respond to no native curiosity are worse than useless, because they try to make language interesting as a thing in itself, regardless of its meaning. This is a pre-eminent pedagogical vice. The teaching

which results in making the youth prematurely conscious of his speech defeats its own ends. Such teaching is solicited by no principle of psychology. It is an outgrowth of that curious propensity of schoolmen which seeks to put all school subjects thru the same mill. These men seem to think that they can teach language in portions, and that, when all the portions are taught, all is taught.

9. The great means of teaching English, both as regards enlarging the vocabulary and as regards formal correctness, are reading, writing, and speaking. All the English hours, in the earlier years, may best be filled with these exercises. The teacher must be a good reader, both in the sense of knowing what things are good to read, and in the sense of knowing how to read well orally. The good reader interests his fellows. Young people find out this important fact before they find out that good writing interests them too. An ambition to express one's self well is easily aroused. Genuine interest in a piece shows itself in the voice and the manner. The voice is the true index of culture. I do not know how the young soul is to be touched except thru the voice.

10. Writing, in any modern school, is constant. The rule for writing should be: no day without a line. But the English department is exempted from the enforcement of this wholesome principle, because all the departments require writing, and one of the most wonderful things about a high school is the quantity of paper it covers every day with some sort of written matter. That only the writing that is done for one special teacher should have educative value is absurd. So far as pupils' writing comes under the eye of any teachers whatever, whether of English or not, such teachers should subject it to criticism, in order to check the bad high-school habit of slovenly writing when out of the jurisdiction of the English teacher. Note-taking, as often practiced, is an exercise pernicious to good writing. But note-taking, rightly practiced, may be made to stimulate the mind without hurting habits of composition.

11. The English teacher may, and usually must, make his composition work periodic. The intervals may be short for the poor writers, and longer for the good ones. There is no need of treating all alike. Uniformity, a curse everywhere in the education of youth, is peculiarly baneful in composition. The youth who most needs your aid should have it most. He who writes with painful difficulty should write every day—keep a diary, perhaps. Others may write every week; the majority every two, three, or four weeks.

12. These last may have themes more ambitious than the others—themes that require research and careful thought. Composition themes may be anything that interests youth; and the ambition governing the class should be, as regards matter, to interest an audience, and, as regards form, to have the composition in shape to print without correction. The audience to be pleased and instructed is, of course, the class, or the

school; and young people's interests are the ones to be kept in view. Absurdly unwise is it to encourage learned writing, or the appearance of it. An excellent occasion for a composition is found when a young person has come in his reading upon something that strikes him as good, and will try to win imitators of his venture by setting forth what he has enjoyed.

13. All compositions must be written, primarily, for the sake of saying something—the best possible thing—the most interesting, the most piquant thing the writer can evolve. Matter first—form as a thing of course. All writing prospers according to its effect on readers. Writing that is incorrect, getting into print, turns the writer to ridicule. This is the way of the world—a fact of human nature. The young writer must learn this solemn truth. He goes forth liable to gross mortification if he cannot write his mother-tongue. The school should in this matter make itself an epitome of the world.

14. In reading compositions, the teacher is to note and correct those faults which are actually made. A scientific naming and classifying of all faults made in all writing is not to be thought of at any time. All the rhetoric to be taught in connection with English composition should be in the teacher's mind and habits. The teacher should be embodied clearness, force, and elegance. Utterly futile is the repetition of rules. The true situation is this: The pupil is ever writing, trying to please his public with his matter, but knowing that his composition will never reach his public unless it first please his teacher, who is good usage incarnate. Perpetually reading books and papers, and so living in a society of good usage, and kept unceasingly desirous of conforming to good usage, the pupil has every incentive and every opportunity to do well.

15. With regard to the teaching of literature, the school procedure is naturally twofold: First is the silent reading at home, whenever time serves. In this way the learner is to get the bulk of his literature. The home reading is indirectly controllable by the teacher by means of the various devices of questioning and composition writing. By far the best opportunity for influencing the pupil's private reading is the private conference between teacher and pupil.

16. Second is the oral reading of selections in the class. In oral reading vocal culture becomes possible, and the *form* of literature, as distinguished from its content, comes to require attention and awaken interest. In this connection must be considered the all-important distinction between poetry and verse, and the distinction between each of these and its proper antithesis; verse and prose being the opposites as regards form, poetry and science the opposites as regards content. Pretty much all the literature the school deals with in the English department will be poetry, whether in the form of verse or in the form of prose.

17. A proper understanding of what poetry is can be achieved only

by acquaintance with much poetry. Definitions make good topics for discussion and may be learned by heart, but they convey no knowledge. Only the definition that one makes for himself avails, and this definition will have to be perpetually revised as one advances in his reading. Short pieces of conspicuously beautiful verse, such as are found in innumerable anthologies, constitute the best text-book of poetic form. Then come up, naturally, the questions: What themes, what illustrations, what motives, does verse poetry most affect? What language does it make use of; what is meant by poetic diction; wherein does poetic diction differ from prose diction? Pupils must not simply be told these things; they must be led to see them.

18. Attention must be paid to meters, stanzas, rhyme, and blank verse. So much metric nomenclature as is necessary to describe the meter of a given piece must be mastered. In reading Shakespeare and Milton the ear should be trained to the movement of the iambic ten-syllable line, the great staple of English verse. Not to feel the metric requirement of a line, to fail to yield the voice to its sway, is to confess one's self no teacher of literature. That which verse undertakes to say it may succeed in saying in grammatically constructed paraphrase; but may, and very likely will, thereby be made to appear in a dress so awkward as to be ridiculous. The truth is, things may be said in well-embellished verse that would be commonplace, or even silly, in prose. No teacher who is also a person of taste will encourage paraphrasing.

19. How many authors a school may study, and how much time it may give to each, will depend on the number of its weekly hours of English. In any case, Shakespeare should be read each year of three, four, five, or six. A valuable addition to one's stock of English speech comes of familiarity with the Shakespearian phrase.

20. Shakespeare stands at the head of English fiction. The fiction we all read, in prose or in verse, is an element of first importance to our lives as individuals and as members of society. English fiction has introduced us to a greater number of distinctly recognizable and familiar characters than have English and American history. There has probably been more written about Hamlet than about any Englishman or American that ever lived in the tide of times. It is a futile schoolmasterism to lament the tyranny of fiction. During adolescence chiefly, but also in later life, the human creature peoples his fancy with forms that continue to live with him as powers of good or evil. Education must take facts as they are. People will read fiction. Therefore we are to inure our youth to the fiction that is best and strongest. As to the fiction about which everybody is talking, I do not see how a busy teacher can keep up with it, or how, being crude and unwinnowed, it can be made surely to yield its best to choice. It would be a pity to give precious time now to what, ten years hence, will be sunk in oblivion, considering that we have in

abundance literature seasoned by many decades, and even centuries, of human approval.

21. It will be of no use to assign lessons in the criticism or description of writings not yet read — perhaps most unlikely ever to be read. A well-written manual of the history of English literature may serve, to one who has a period of study, as a guide to the best things in that period. But the desire for guidance should precede the guiding. To stimulate research tasks may be set — rather to individuals than to classes. Recitations in the history of English literature are useless, unless the authors are to be looked up. A recitation without research is precisely what a repeated demonstration in geometry would be. "To know by heart is not to know at all," says Montaigne; and again: "A sorry mastery is the mastery of a book." But our examination system keeps us in the profession of the belief that knowing by heart is perfect knowledge.

22. In looking after pupils' reading, the teacher must consider individuals as regards sex, age, taste, condition, opportunity; and in censuring compositions, private talk with the individuals goes infinitely farther than reprimand before a class. Personal matters are not properly treated in public, and one's writing is a personal matter. You cannot impress a point upon a pupil as a delicate matter if you speak of it in public. If you bring his writing up in the presence of many, he takes your procedure as a piece of the scholastic routine, which he has learned will slip along; and he practices the philosophy of the much-chidden, which is, to remain unruffled, knowing that "come what may, time and the hour run through the roughest day." But the private interview, by its very nature, suggests delicacy, reticence, importance. The public reproof minimizes the fault, the private conference enhances its impressiveness.

23. The teacher of English is always inspecting written work, listening to vocal expression. In a certain sense he is perpetually examining. He knows every day just where he is. Periodical examinations, therefore, he does not need, and could not profitably have. A young reader needs, in his study of literature, all imaginable conditions of enjoyment. The purpose of literature is to be recreative and pleasurable. To make it a gymnastic to the memory is to ruin it as literature and convert it into something ascetic, something teasing, something to be anxious about and get marks for. Professing to cultivate a taste for good reading, we go about to cultivate a distaste for it; for it is to be said that, while such studies as mathematics and the ancient languages, which confessedly constitute an apparatus for mental discipline, can stand any amount of scholastic battering and dissection, the residuum of literary analysis is necessarily lifeless, its essence is gone, it is no longer literature.

24. Examinationism is, in fact, a disease, now having a great run in our education. The examination machinery is wonderfully interesting to certain minds. Its chief use seems to be to heads of systems, who find

in it a substitute for personal influence, hoping, by means of mechanism, to make themselves felt thruout the entire body which they are set to control.

25. As to the extent to which the scientific study of English can be carried in the high school, opinions naturally vary. An absolute canon cannot be imagined. No part of the conceivably possible scientific study of English is essential to the practical acquisition of English speech. Yet the ancient custom of putting grammar somewhere in the school course has its justification. Rejecting grammar as the art of speaking and writing English, and regarding it simply as a science, or knowledge, we find its function to be to serve as a natural and easy introduction to abstract thought by familiarizing the learner with the conception that the fundamental categories of thought and speech are identical. To know the parts of speech, the facts of syntax, the nomenclature of sentence structure and analysis, is important. The usual mistake is made in putting grammar too low down in the course. The language should be well possessed before it is subjected to scientific study. The youth should not be troubled with grammatical technique till he knows enough to perceive its desirableness.

26. Pupils who read the late middle English of Chaucer, or English no older than the Tudor period, will necessarily have to do something with historical grammar. The usual compends of Chaucerian and Shakespearian grammar need expansion and explanation by the teacher, who should therefore have some acquaintance with Anglo-Saxon. The importance of historical English grammar consists herein, that it furnishes a safeguard against narrow views as to what is good English idiom. It is a widespread belief among English scholars that the language has in modern times been losing some portion of its native raciness. This loss is sometimes ascribed to unintelligent teaching in the schools. If this degeneration of the language really exists, the corrective of it lies in an increased respect for the elder speech.

27. It is doubtless feasible to teach youth of high-school age Anglo-Saxon. Text-books contemplating just such work exist in considerable variety. But this study should not be introduced unless there is in the school a proper constituency for it; that is, a sufficient number of pupils who have a genuine curiosity to study their language in its oldest forms. I could wish, and hope to see, all high-school studies optional, and would have, instead of courses, only eligible subjects. To require a high-school pupil to study Anglo-Saxon would be manifestly absurd. Anglo-Saxon should be an available subject in a large high school, but it should not be a required part of any course. The high school is the people's college. In its college the people should have facilities for studying the native language in its entire history.

A PROPOSED FOUR-YEARS' COURSE IN ENGLISH FOR SECONDARY SCHOOLS

BY MISS CHARITY DYE, HIGH SCHOOL, INDIANAPOLIS, IND.

FIRST YEAR

FIRST HALF

Composition-rhetoric.—1. A review of grammar; business-letter forms. 2. Exercises in sentence variety thru written impressions received from the literature studied; from observing nature and everyday life.

Literature.— Selections from Whittier, Irving, and Burns.

Suggested reading.— Irving, *The Alhambra*, *Tales of a Traveler*, *Life of Goldsmith*, *Knickerbocker's History;* Goldsmith, *The Deserted Village;* Addison, the *Sir Roger de Coverley Papers;* Cooper, *The Last of the Mohicans;* Helen Hunt Jackson, *Ramona*, *Bits of Travel at Home;* Wendell Phillips, *Toussaint l'Ouverture;* Whittier, *Margaret Smith's Journal;* Lanier, *Boys' King Arthur*, *Boys' Froissart.*

SECOND HALF

Composition-rhetoric.— 1. Paragraph formation, noting clearness, unity, sequence, and coherence. 2. Written exercises: the humorous in Holmes, Curtis, and the humorous writers in suggested reading; table-talk; impressions received from reading and observation.

Literature.— Selections from Bryant and Holmes; Shakespeare, *The Merchant of Venice.*

Suggested reading.— Thoreau, *Walden*, *Early Spring in Massachusetts;* Burroughs, *Pepacton;* Warner, *My Summer in a Garden;* Curtis, *Prue and I;* Cervantes, *Don Quixote;* Cowper's and Luther's *Table-Talk;* Lowell, *The Biglow Papers;* Bryant, *Prose Writings* and translation of the *Iliad.*

SECOND YEAR

FIRST HALF

Composition-rhetoric.— 1. Exercises upon choice of words; upon the poetic words, epithets and figures in the literary study. 2. Writing of simple events in connection with the short story; original epithets and figurative expressions embodied in written exercises.

Literature.— Selections from Hawthorne; Shakespeare, *Julius Cæsar.*

Suggested reading.— Donald G. Mitchell, *About Old Story-Tellers;* Mary E. Wilkins, *Short Stories;* Poe, *The Gold Bug* and *The Maelstrom;* Kipling, *The Jungle Book;* Bryant, translation of the *Odyssey;* Froude, *Julius Cæsar;* Clough, translation of *Plutarch's Lives.*

SECOND HALF

Composition-rhetoric.—1. Arrangement of material into plan; proportion of parts in composition. 2. Letters embodying impressions received from suggested reading and from life. A written analysis of one of the essays studied.

Literature.— Selections from Lowell, Emerson, and Whitman; a brief view of American literature; intensive study of "The Harvard Commemoration Ode," "The American Scholar," or "Self-Reliance."

Suggested reading.—*Letters of James Russell Lowell; Emerson-Carlyle Correspondence;* Andrew Lang, *Letters to Dead Authors;* Tennyson, *Idyls of the King*, *Ode on the*

Death of the Duke of Wellington; Lincoln's *Gettysburg Address;* "Oration of Pericles over the Athenian Dead" (translation); E. E. Hale, *A Man Without a Country;* Plumptre, translation of *Prometheus.*

THIRD YEAR

FIRST HALF

Composition-rhetoric.—1. The *characteristic* differences between the great divisions of poetry. Attention to rhythm, rhyme, stanza, foot, and the four measures most common in English verse. In connection with poetry, especial attention to exercises embodying the elements of the poet's art in the selections studied. 2. In connection with the novel, ten-minute compositions written in class without notes; compositions to be based upon studies made of the materials, setting, plot, incident, character, purpose, and method of a novel; also upon comments of books studied and upon their style and diction. The compositions also include the principles of paragraph structure, variety of expression, and an acquaintance with the various discourse forms.

Literature.—The novel, studied thru *The Talisman, Ivanhoe, Silas Marner,* and *Hard Times* (other novels may be substituted); poetry of Tennyson; Byron's *Childe Harold,* Cantos III and IV.

Suggested reading.—Austen, *Pride and Prejudice;* Eliot, *Mill on the Floss;* Howells, *The Lady of the Aroostook;* Hawthorne, *The House of Seven Gables, Marble Faun;* Scott, *Quentin Durward, Kenilworth, Marmion, Woodstock;* Dickens, *David Copperfield;* Blackmore, *Lorna Doone;* Hugo, *Les Miserables;* Tolstoi, *Master and Man;* Craik, *John Halifax, Gentleman;* Stevenson, *Treasure Island;* Goldsmith, *The Vicar of Wakefield;* Shelley, *The Cloud,* "The Skylark;" Poe, essay *The Poetic Principle, The Lotus Eaters,* from the *Odyssey.*

SECOND HALF

Composition-rhetoric.—1. Exercises for discovering the æsthetic elements in literature; the chief characteristics of literature known as criticism. 2. Writing of various forms of description as a test of the pupils' æsthetic development. Books reviewed from the point of criticism or appreciation.

Literature.— Ruskin, selections from *Modern Painters,* and *The Queen of the Air;* Lamb, six of the *Essays of Elia;* Carlyle, *Heroes and Hero Worship* and *The Edinburgh Address;* one oration from American literature; assigned critical essays in interpretation of the authors studied.

Suggested reading. — Keats, *Ode on a Grecian Urn;* Matthew Arnold, "Dover Beach;" Rossetti, *The Blessed Damozel;* Walter Pater, *The Child in the House;* De Quincey, *Essay on Literary Style;* Barrie, *Margaret Ogilvie;* Dickens, *A Tale of Two Cities;* Carlyle, essay on *Burns;* Ruskin, *Sesame and Lilies;* Sumner, *The True Grandeur of Nations;* Burke, *Speech on Conciliation with America.*

FOURTH YEAR

FIRST HALF

Composition.— Special theme work, involving the principles underlying all forms of discourse, but emphasizing exposition.

Literature.—The history of the early and middle periods of English literature; Chaucer, the prologue to the *Canterbury Tales.* Pupils are also expected to read and write a review of one of the *Canterbury Tales.* Shakespeare, *Hamlet, Macbeth* or *Coriolanus;* together with a study of the development of the modern drama; Spenser, the first book of *The Faerie Queene.*

Suggested reading.— Spenser, remaining books of *The Faerie Queene;* Bunyan, *Pilgrim's Progress;* Langland, *Piers the Ploughman;* Abbie Sage Richardson, *Tales from Old English Poetry;* Maclehose, *Tales from Spenser;* Lowell, essays on *Chaucer* and on *Shakespeare Once More;* Shakespeare, historical plays; Johnson, *The Lives of the Poets;* Bulwer, *The Last of the Saxons, The Last of the Barons.*

SECOND HALF

Composition.—Special theme work, emphasizing the simpler forms of persuasion.

Literature.—Bacon, selected essays; Milton, first two books of *Paradise Lost,* and *Lycidas.* By means of written reviews prepared by individual pupils, the class is made acquainted with the remaining books of *Paradise Lost,* and also with the earlier poems. The history of English literature in the seventeenth and eighteenth centuries, with a mention of the most prominent modern authors. Selections from Dryden, Pope, Addison, Gray, Wordsworth, Coleridge, Shelley, Keats, and Robert Browning.

Suggested reading.—Milton, *Areopagitica;* Lowell's essays *Dryden* and *Gray;* De Quincey, *The Affliction of Childhood* and *Dream Echoes;* Emerson, *The Over-Soul;* Lee, *The Life of Dorothy Wordsworth;* Thackeray, *Henry Esmond;* Dryden, *Palamon and Arcite;* Walton, *The Complete Angler;* Macaulay, essays on *Milton* and *Addison;* Plato, translation of the *Apology.*

NOTE.—Selections from Welsh's *Development of English Literature* and Morley's *English Writers;* Taine on "The Saxons" and "The Normans;" Collier's comments upon the life of authors in the eighteenth century, and correlated topics in English history read and commented on by the teacher.

EXPLANATORY COMMENT ON THE COURSE

Assumptions.—1. That the secondary school is essentially a preparatory school. 2. That, as the majority of its graduates engage at once in the active duties of life, its primary function is to fit students for life. 3. That the secondary function of fitting students for college may be fulfilled by a flexible program in any well-equipped high school. 4. That entrance to the secondary school requires: (*a*) In grammar, a correct use of the auxiliary verbs; of the principal parts of the irregular verbs in common use; of the relative pronouns, possessives, and irregular plurals; also an observance of agreement between verb and subject, pronoun and antecedent, and of tense sequence. (*b*) In composition, the ability to write a number of correctly connected sentences expressing consecutive thought upon some familiar subject; and in connection therewith power to use the dictionary and encyclopædia. (*c*) In literature, a knowledge of the root stories of the Hebrew and other great literary Bibles; some of the most prominent myths and historic legends; the life of Lincoln and the autobiography of Franklin; the more familiar poems of Longfellow and Whittier, Hawthorne's *Grandfather's Chair,* Irving's *Rip Van Winkle,* Lamb's *Tales from Shakespeare,* and as many heroic ballads as the time allows.

The problem.—The general problem is one with that of public education. It aims to refine the mass of average mind till it is sensitive to the higher issues of life, and till the individual is started toward self-realization. It seeks to provide discipline; to lay the foundation for institutional life, and to produce social beings ready to live in harmony with their kind. The particular problem is one of matter and not of method. Its question is: "What shall be selected from the mass of subject-matter, of what kind, and in what proportion, to accomplish the aims proposed?"

The basis for selection of literature.—The literature of the past is a fundamental factor in education, and its function of giving worth to the present cannot be overvalued. If American youth are to live in and perpetuate a growing democracy, they must be educated in democratic ideals; they need to absorb the genius of American civic and literary life. This need calls for a proportionate share of American literature in the curriculum of the public school. The literature produced in this country has claims of its own, independent of conformity to the standard of classical antiquity or of mediæval feudalism. With the growth of the spirit of democracy, art standards have been enlarged to include new subjects and broader sympathies. Already new forms of expression more adequate to the growth of humanity have appeared. "The Man with a Hoe," by Millet; *The*

Weaver of Raveloe, by Eliot, and "A Man's a Man for a' That," by Burns, have indeed dignified labor and shown the poetic in the commonplace, and applied to all men the measure of a man. Not less have the "Ride of Paul Revere;" "The Concord Fight;" "The Snow-bound Home;" "Uncle Tom in the Cotton Field;" "Democratic Vistas," by Walt Whitman; "The Harvard Commemoration Ode," by Lowell; the defense of the constitution, by Webster; the upholding of civil-service reform, by Curtis, and the address of Abraham Lincoln on the battlefield of Gettysburg dignified life and labor this side the Atlantic, and helped to produce a literature that is both American and national.

Order of discourse forms.—Since discourse is explained by literature, and literature is, in turn, explained by life, life must furnish a grounding for the study of discourse as well as of literature. All the discourse forms are used together in natural expression from infancy to age; they should be used together in school. Not only should the general forms, narration, description, exposition, and persuasion, be used simply and freely whenever an impulse would express itself thru them, but also the specific forms of dialog, soliloquy, or monolog should be employed when they are the natural means of expression. Expression should be a perfect correspondence between feeling and form. While all the varieties of discourse are used thru the four years, narration and description are emphasized in the third year, exposition and persuasion in the fourth year. Argumentation is left to be pursued in connection with the study of logic in college, where a course in analytic grammar is also recommended. The rhetorical study is made to conform to the literary study, and is intended to be made as practical and informal as possible.

Provisions of the course.—This course in English provides for five lessons a week for four years. For the first year, three lessons a week in composition-rhetoric, and two in literature; the time afterward can be distributed as the teacher sees fit. In the fourth year it is intended to give a historical view of. the development of English literature. Collateral readings, while only suggestive, may be reported upon in class. Practice in the use of indexes, the making of reference lists and reference cards in connection with studies, are necessary provisions for helping students to a rightful use of books and libraries. The course especially recommends that stress be laid upon composition in connection with literature. For example, in the first-year studies in Whittier, pupils can write upon Whittier's heroes, his "Flemish Pictures," "A Typical New England Home," "The Civil War Poet," etc. Weekly informal and impromptu compositions should be read and discussed in class. One lesson should be given to the biography of each author studied.

BOOKS UPON WHICH THIS COURSE IS BASED

IN TECHNICAL STUDY.—Lewis, *A First Book in Writing English;* Scott and Denney, *Composition-Rhetoric;* Dye, *The Story Teller's Art;* Carey, *Guide to the Study of Criticism;* Wylie, *Studies in the Evolution of English Criticism;* Santayana, *The Sense of Beauty;* Gummere, *A Hand Book of Poetics;* Baker, *The Principles of Argumentation;* rhetorics by Genung, Hill, and Carpenter.

IN LITERARY STUDY.—Pancoast, *Introduction to English Literature;* complete and selected works of the various authors, owned by the school and rented to the pupils.

SYLLABUS OF A COURSE IN ENGLISH, WITH A DEFENSE OF THE SAME

BY W. F. WEBSTER, EAST SIDE HIGH SCHOOL, MINNEAPOLIS, MINN.

FIRST YEAR—FIRST SEMESTER

LITERATURE—NARRATION.

SCOTT—*Marmion* or *Lay of the Last Minstrel.* Vigor and rapidity.

POE—"Gold Bug," "Ligeia." Skill in technique.

TENNYSON — "Holy Grail." Elegance.
LOWELL — "Sir Launfal." Ease and beauty.
WHITTIER — "Snow Bound." Simplicity.
BROWNING — "Hervé Riel," "Incident in French Camp." Action.

Home reading :
STEVENSON — *Treasure Island.*
KIPLING — *Jungle Books* and *Tales.*

Meaning of the author.

1. Outline of story.
2. Incidents in life of any characters.
3. Central ideas and purpose of story.

Method of the author.

1. Does the interest center in the incidents or the characters ?
2. Is there a climax ?
3. Do all the parts converge to this point ? *Unity.*
4. Are the parts arranged in a sequence ? *Coherence.*
5. Is the interest sustained ?

Style of the author.

Words that give movement to any passage. *Verbs.*

COMPOSITION — NARRATION — TO GIVE SPONTANEITY.

Incidents without plot.

Selection of material. *Unity.*
Arrangement of material. *Time sequence, coherence.*
Proportion in treatment. *Mass, emphasis.*
At least three-fourths of subjects should be incidents in lives of pupils.

External form of composition.

Heading, margins, indention of paragraph.

Grammar study.

Review the principles.
Especial attention to inflections of pronouns and verbs, agreements of verbs and pronouns, verbals.
Concord.
Punctuation.
Capitalization.

Figures of speech based on likeness : simile, metaphor, personification.

It will be well to adopt at once some system of abbreviations for marking papers. These should be dictated to pupils and copied by them into a "composition notebook." This book should be large, well made, to serve for the four years.

FIRST YEAR — SECOND SEMESTER

LITERATURE — DESCRIPTION.

HAWTHORNE — *Old Manse.* Graceful diction.
LOWELL — "Indian Summer Reverie." Figures and specific words.
GRAY — "Elegy." Serious, thoughtful.
GOLDSMITH — *Deserted Village.* Subjective description.
BYRON — *Childe Harold.* Daring description.
POE — "Fall of the House of Usher." Attention to details.

Home reading :
BLACKMORE — *Lorna Doone.*
BURROUGHS — *Pepacton.*
KIPLING — *City of Dreadful Night.*

Meaning of the author.

Method of the author.

1. Does the author retain his point of view ? *Unity.*
2. Does the author arrange details in order ? *Coherence.*
3. Are they treated in right proportion ? *Emphasis.*

Style of the author.

Words that produce pictures.
General terms or specific words ?

COMPOSITION—DESCRIPTION—TO GIVE ACCURATE EXPRESSION.

Subjects should be common and individual — not classes of objects.

Subjects should be things seen by pupils.

Treatment.

Selection of details decided by purpose of description.
  Get a point of view and stay there. *Unity.*
  Place details in some order. *Coherence.*
  Arrange and proportion details to effect purpose. *Emphasis, mass.*

It is a good plan to use same subject, varying conditions or purpose. "Appearance of My Home after a Long Absence;" "Appearance of the Home from which Drunken Cruelty Drove Me;" "My Dog;" "My Neighbor's Dog."

Paragraph structure.

Topic sentence developed by—
  Particulars and details.
  Telling what it is not.
  Comparison and analogies.

Note emphatic places in a paragraph and have something there.

Words.

Choose those which give clear pictures.
  Nouns, adjectives, verbs.
  Specific words opposed to general terms.

SECOND YEAR—FIRST SEMESTER

LITERATURE—EXPOSITION.

RUSKIN—*Sesame and Lilies,* two essays. Digression.
BURNS — Selected poems.
CARLYLE—"Burns." Poetic imagery.

Home reading:
  KINGSLEY — *Hypatia.*
  STEVENSON — *Crabbed Age and Youth.*

Meaning of the author.

Outline showing main thesis and subordinate propositions, preserving their dependence and relative importance.

Method of the author.

Does he stick to his point ? *Unity.*
Does he pass from the known to the unknown ? *Coherence.*
Does he arrange his material to get highest effect ? *Emphasis.*

Style of the author.

Words that link parts together. Conjunctions, relatives, adverbs, and phrases.
How does he obtain clearness ?
Are the figures of speech and comparisons effective ?

COMPOSITION — EXPOSITION — TO ENCOURAGE LOGICAL THINKING AND ADEQUATE EXPRESSION.

Terms.

Definitions — genus and differentia.

Propositions.

1. Clear statement of proposition. "*Key sentence.*"
   This will limit the
2. Discussion.
   - *a*) What shall be included? *Unity.*
   - *b*) What shall be excluded? *Unity.*
   - *c*) In what order? *Coherence.*
   - *d*) In what proportion? *Emphasis, mass.*

Special attention to mass and proportion.

Methods of condensation and expansion.

Other methods of showing relative importance of thoughts in an essay.

At least ten weeks of this semester should be devoted to outlines, in which the topic sentences shall give the headings of successive paragraphs. From this time there should be handed in with each essay an outline written before the essay. For class work, select a topic sentence, or more if necessary, to be developed by a method designated by the teacher, until the pupil understands the kinds of paragraphs so far studied and will make a happy choice.

It is well to outline the same theme in different ways, having different points of view.

SECOND YEAR — SECOND SEMESTER

LITERATURE — EXPOSITION (*continued*).

MILTON — "L'Allegro," "Il Penseroso," "Lycidas." Allusion.
MACAULAY — "Milton." Sentence, paragraph.
BURKE — "Conciliation." Logic.

Home reading:
LYTTON — *Last Days of Pompeii.*
DE QUINCEY — *English Mail Coach, Confessions of an Opium Eater.*

Meaning of the author.

Analysis of paragraph.

Method of the author. (As in first semester of this year.)

Style of the author.

Does each paragraph discuss a single topic? *Unity.*
Are the sentences arranged in logical order? *Coherence.*
Does each paragraph have a climax? *Emphasis.*

COMPOSITION — EXPOSITION (*continued*).

Outlines. (As in first semester of this year.)

Paragraph structure.

Repetition.
Proofs.
Specific instances.
Cause and effect.
Combination of forms.

Connectives and methods of transition. Coherence.

Conjunctions, pronouns, adverbs, adverbial phrases, transition, paragraphs.

Sentences.

Periodic, loose, and balanced.

To make pupils think a whole sentence before writing, insist on many periodic sentences.

Long — what effect?

Short — what effect?

If argumentation is to be introduced as a distinct form of discourse which should be studied, it should not take more than six weeks at the end of this semester, and it should be very elementary.

THIRD YEAR — FIRST SEMESTER

LITERATURE — NOVELS.

SCOTT — *Ivanhoe* or *Talisman*. } Incident. (Read but one.)
STEVENSON — *Kidnapped* or *The Black Arrow*. }
GEORGE ELIOT — *Silas Marner*. Character.

Home reading:
GEORGE ELIOT — *Romola*.
THACKERAY — *The Newcomes*.

Meaning of the author.

Method of the author.

Is the interest centered in plot or characters?
Do all the details work toward the climax? *Unity*.
Are parts arranged in best order? *Coherence*.

Style of the author.

Picturing power.
Phrasal power.
Character-drawing power.
Emotional power.

COMPOSITION.

The principles studied in the first two years are sufficient to give clear, accurate expression; these principles should guide the pupil in writing, and the teacher in criticism during the remaining years of the course. It may be wise, however, to touch upon some of the refinements of composition.

Sentences should be studied for —

1. Clearness dependent upon
   - *a*) Choice of words.
     - Latin or English.
     - Specific or general (figures of speech).
   - *b*) Arrangement of words.
     - Coherence.
     - Mass.
2. Force.
   - *a*) Choice of words.
     - Latin or English.
     - Specific or general.
   - *b*) Arrangement of words.
     - Inversion.
3. Elegance.
   - *a*) Choice of words — by ear.
   - *b*) Arrangement of words — by ear.
     - Assonance, alliteration.
     - Metrical phrases.

The subjects of composition should be drawn more from the literature. Outlines of stories, episodes, conversations by character upon topics of our time, descriptions of scenes, character sketches, and purpose of author give a variety of subjects which should employ the different forms of discourse in about equal proportions.

Force and elegance should be subordinated to clearness, the real goal of composition in secondary schools.

THIRD YEAR — SECOND SEMESTER

LITERATURE — VERSIFICATION AND CRITICISM.

WORDSWORTH — "She was a Phantom of Delight," "I Wandered Lonely as a Cloud," "Hart-Leap Well," "Milton" (sonnet), "Tintern Abbey," "Intimations of Immortality."
KEATS — "Ode to a Grecian Urn," "Eve of St. Agnes."
SHELLEY — "The Sky Lark," "The Cloud."
SHAKESPEARE — *Merchant of Venice.*
ARNOLD — "The Study of Poetry," "Wordsworth."
LOWELL — "Chaucer," "Shakespeare Once More," or "Wordsworth."

Home reading:
HAWTHORNE — *Marble Faun.* Critical.
KIPLING — *The Light that Failed.* Life *vs.* technique.
SHAKESPEARE — *Tempest* or *Twelfth Night.*

Meaning of the author.

Method of the author.

Style of the author.
English or Latin words.
Phrasal power.
Picturing power.
Emotional power.
Musical power — vowels, alliteration, accents.

COMPOSITION.

During the time the class is studying versification, the compositions may be letters asking employment, recommending friends for positions, and answering "wanted-column" notices. The latter part of the term should be devoted to book notices and reviews, newspaper editorials, etc., and criticisms of new stories and poems.

FOURTH YEAR — FIRST SEMESTER

LITERATURE — DIFFICULT SELECTIONS.

CHAUCER — "Prologue" and one tale. Historic value.
MILTON — *Paradise Lost* (one book). Imagery.
EMERSON — "Compensation" or "American Scholar."
BROWNING — "Balaustion's Adventure," "Rabbi Ben Ezra." Difficult sentence structure.
TENNYSON — *Selections* and *In Memoriam* (parts). Musical power, science in poetry.

Home reading:
STEVENSON — *Lantern-Bearers, A Humble Remonstrance, Gossip about Romance.*
HARRISON — *Choice of Books.*

FOURTH YEAR — SECOND SEMESTER

A HISTORICAL REVIEW OF ENGLISH LITERATURE — TEXT-BOOK.

Home reading:
LOWELL — "A Good Word for Winter," "New England Thirty Years Ago."
HAWTHORNE — *Our Old Home.*

Compositions during the last year should be more pretentious, approaching two thousand words each. Three of these should be written each semester under the critical supervision of the teacher. Class work will yield to individual instruction.

DEFENSE OF SYLLABUS

BY W. F. WEBSTER, MINNEAPOLIS MINN.

In addition to the principles which all admit should guide in making a course in English, I shall introduce two, viz.: that composition should be taught in some definite order, and that the literature and composition should be so correlated as to be mutually helpful. It will be granted that the literature should be the best, whether written on this side of the Atlantic or on the other. The quality of literature is not a question to be decided by place of residence; whether from Salem or London, Calcutta or Vailima, makes no difference. It may be commendable patriotism, but it is a very partial survey, which finds half of the best literature written in our own fair land; yet many courses are more than half made up of American authors. Good they are, but not the best; and less than the best is an injustice. It will be conceded, also, that the course should be graded. This should be by the selections read and not according to authors. It is a mistake to read "Sir Launfal" and "The Commemoration Ode" in the same term, or "Rabbi Ben Ezra" and "Hervé Riel." I am way within bounds when I say that four years of growth lie between Tennyson's *Idyls* and *In Memoriam;* and it is a discouraging waste of time to compel pupils to an arrangement that we ourselves never follow in our own reading. We agree, then, to take from the broad stream of English as much of the very best as we can read in the short time at our disposal, and to arrange it in such an order that the advance from high to higher shall be gradual, easy, and fascinating.

In organizing a course in English, an intimate relation should be established between the literature and the composition. We have done much in our schools toward correlating the different lines of work, in some cases too much; in these two divisions of the same subject, however, there has been little or no attempt at correlation. In branches so indissolubly associated, the arrangement should be sought which yields the most mutual benefit. The advantage of this alliance is a fact of all time. From Chaucer to Stevenson there has been a laying on of hands and an unbroken succession of inspired men, none of whom has neglected to acknowledge his debt of obligation for matter, method, or inspiration. The poet Keats was not the son of a hostler, but he was born the day a copy of Spenser's poems fell into his hands; and Keats can with pride claim the youthful Lowell as his literary descendant. What do the terms Johnsonian, Shakespearian, Dantesque mean but that the writings so characterized approach the style of these worthies? Even those gentlemen who assert that composition should not be taught by a special teacher—a proposition as absurd as that physiography should be taught by no one in particular—those persons who would divide the compositions into as many packages as there are teachers in the corps, and allow each teacher to contribute his share to the general discouragement, even they recognize the subtle influence of a person's reading upon his diction. The hand is subdued to what it works in; and just as surely as evil communications corrupt good manners, so surely constant association with the culture and strength of greatness will result in stronger thinking and more refined expression.

On the other hand, the study of a few principles which underlie good composition increases the appreciation of good literature. Altho he enjoys music, it is folly for a layman to claim that he appreciates Wagner as does Mr. Damrosch. His capacity for enjoyment has been augmented by every increment of his musical knowledge, and he has learned secrets which admit him to a heaven of rapturous glory shut against the uninitiated. And the principle is true of all art. Tennyson would not so often have sought his Virgil, nor Arnold and Pater their Homer, had they not seen a beauty there far outshining the beauty we behold. Beyond the power of the golden words of ancient wisdom to do, they were transported with delight while looking at the gorgeous patterns of those master weavers. Every advance in the knowledge of any art is attended by a corresponding increase in the enjoyment of its beauties.

If it be accepted that classic English, in amount and kind to suit the capacity of the pupils, shall be arranged to illustrate the work in composition, the question becomes, What is the course in composition? And I am assuming that a few elementary principles can be taught. Too long have teachers deluded themselves with the thought that they were teaching composition, when they were showing their pupils how not to do it. With thick, bulging eyeglasses they have been peeking here and there looking for misplaced commas, misspelled words, and, forsooth, for a lack of agreement between verb and subject, unable to note the excellency of so large a unit as a sentence, to say nothing of a three-page essay. Nagging criticism which sees nothing larger than a split infinitive is an abomination to a generously molded youth. Dickens has lapses worse than these, yet we keep on reading him, because the superiority of the whole so far outweighs such trifles. All his people will act consistently and be perfect creations of imperfect humanity, tho there may be a lack of concord between a relative and its antecedent. We have been tithing of mint and anise and cummin, and we have neglected the weightier matters of the law. This system has brought intellectual torpor and spiritual death. No wonder that dull-eyed pupils, whose youthful vitality has barely withstood this starvation, have been seen in many a class-room lying listlessly about under the narcotizing influence of negative, destructive criticism. To find fault is not the whole duty of a teacher. Organized, constructive criticism is as necessary in this subject as in algebra or Latin. There are clear, tangible, objective points in the construction of a theme, a paragraph, or a sentence which can be taught. We have worked long enough telling these unfortunate young people how it is not done; it is time that we begin to show them how it is done.

The forms of discourse I have arranged in this order: narration, description, and exposition. Narration I place first, to give spontaneity. The boy who can tell a good story to his companions, arranging the details so as to get the best effect, and never losing sight of the point, when he comes to class finds himself all tied up in his efforts to satisfy the numberless demands of his teacher. He is fettered, shackled, ball-and-chained, his shoulders bent under a load of don'ts, and then we expect him to run. It reminds me of my first day with a bicycle. A kind friend, solicitous for my gallant appearance, advised me to sit straight, not to balance by keeping my body over the wheel, but by keeping the wheel under my body, and then, on pain of a broken friendship, to use the ankle movement. I tried to do all these graceful things and made a sad and laughable failure. One day, however, in the absence of my very proper friend, I led the wheel out, and by some accident got started. I had many curves in my spine, one pedal was caught by a heel and the other in the hollow of the foot, I swayed from side to side, but I was going. I learned that the first thing to do in riding a wheel is to go; then afterward I could catch the pedal with the ball of my foot, sit gracefully, and move with a dignified ease. And in writing, the first thing is to get going; the start will be ungraceful jumping, there will be uncontrollable digressions, and the finish will be a sudden fall. But there has been an exhilaration, and there will be an enthusiasm to try again. Spontaneity is the object in the first term's work.

Accuracy of statement is best secured in description. Stevenson, Maupassant, and Ruskin were always writing little bits of description; and the author who can handle this department of literature is pretty sure of success. In this field the theme is but a short paragraph, and its perfection depends on a few severe principles. It is really the practice ground of literature. In securing method in description, nothing is of more value than reading many selections to illustrate the principles you wish them to absorb. The definite point of view, the careful selection of details which heighten the effect, and then the one right word to express exactly the thought — these require the strictest fidelity to truth, and the most painstaking accuracy of statement.

When the pupil has gained some freedom of expression, and has learned the value of accurate statement, he is ready to take up the next form of discourse which makes severer demands upon his reasoning faculty. As composition is the art of conveying to the reader what is in the writer's mind, great care should be exercised that little or no demand is made for the collection of materials. No worse mistake can be made than to drive pupils to books when preparing an essay. In spite of their integrity, they will copy phrases while taking notes, and these they will slip in unintentionally, and as a composition exercise it has been entirely worthless. To know definitely what one does think of the commonest topic; to make an adequate and accurate statement of the proposition, including enough and not excluding too much; to arrange in logical and forcible order the ideas that lead to the conclusion, emphasizing important considerations and subordinating lesser matters; to carry the whole forward to a firmly established, solid conclusion, is hard enough when one has the requisite knowledge, and this process makes exactions upon the rational faculty equal to any work in a school course.

Argumentation any farther than it will inevitably enter into exposition should not be a special subject of high-school study. Deduction and induction are matters that may better be deferred to a more mature age. All refinements of style should be excluded from a high-school course in English, tho they should be noted in the reading. Exercises for the development of any particular quality of style other than clearness are plainly not in the province of our work. The plan includes only the three forms of discourse, but these are susceptible of great variety in their applications. Outlines of stories, descriptions of scenes, conversations by characters, discussions of the author's purpose, and elementary criticisms give opportunity to avoid monotonous repetition. And if in the end the pupils can think clearly and adequately express what they think and feel, if they can tell a plain tale so that a wayfarer need not err, all reasonable demands will be satisfied.

I have arranged the literature in groups; narration, description, and exposition are followed by the novel, some shorter poems, a few critical essays, and difficult selections. The reason for the arrangement during the first two years has been given. To avoid monotony, prose and verse have been mingled, and authors have been introduced whose manner and subjects will contribute sufficient variety.

The novel, which for some unreasonable prejudice has until recently been excluded from school — the form of literature the most read, and for that reason the most produced; the form which is the truest criticism of modern life, and therefore the most valuable for study — has been put into the third year. That pupils shall not skim along to get the story, but be encouraged to read out of it what the author has, with his soul's strength, written into it, is the reason for introducing it into the course. Versification and criticism acquaint the pupils with the more refined beauties of literature which are found in the delicate harmony of thought and phrase.

Then there are authors who would not be fairly represented unless some of their more difficult works were read; and there are others whose works all seem difficult. Chaucer should be read, not alone for his manly view of life, but for his great influence on the whole course of English literature; Milton, Browning, and Tennyson would be imperfectly understood if some severe study were not given to their typical compositions. These I have placed in the fourth year. And last, as a summary of the course, comes the history of English literature. For after looking at these authors singly and close at hand, it will be an advantage to step back and from a distance view the whole onward sweep of our literature, to discern the influence of the times and the relations of authors one to another. For this purpose there should be used a short and scholarly text-book.

It may be inferred, as I have said so much of the relation of literature to composition, that I think of it in no other way. The meaning of the author is placed first in the syllabus because it is the most important. Its supremacy cannot be exaggerated. Not only does literature transcend composition in value, but I am more than half way to say that it has more virtue than all the other studies, for it has extracted the best from them all. To follow Burke thru one of his demonstrations, with its propositions and counter-propositions, its corollaries and scholia, all marshaled in the most effective manner, and each contributing its share to establishing the main thesis, is an exercise the equal of a book in Euclid. But superior to the advantages of utility is the pleasure derived from the beauties of literature. The full-toned roll of Webster's deep-breathed periods, the burst and crash of the leaping lines in Byron, the dainty delicacy of Stevenson's studied prose, the liquid murmuring of Tennyson's purling music—in each there is a beauty to match a Phidian marble or a landscape by Corot. Yet deeper than these, and higher and wider than their utility and their beauty, is the relation of literature to life. Mathematics and science may tell us how to get a living and to keep our bodies well, but literature alone tells us how to live. There is an awful warning in George Eliot's *Tito*, upon the horizon of whose young life there rested but a small shadow, imperceptibly spreading with his growing years until his whole sky is overcast in hideous darkness; and with his death he pays the wages of sin. Shakespeare takes the world's great heart; and all its passions — its love, its hate, its despair, its forgiveness, and its treachery — are made flesh and dwell among us, and we, beholding the infinite possibilities for good or evil resident in each human soul, tremble or rejoice. Or under the serene stars, beside clear-souled Emerson, with heads uncovered to the deep sky, we catch the breezes of heaven; and as the earth slips away from us, with its muck and mire, we can almost discern the divine harmony and the perpetual beneficence of God's unending creation. An efficient force in intellectual development, an abounding source of æsthetic culture, an open sesame to the deepest knowledge of life, our literature has but now come to claim her heritage; and, easily advancing from more to more, she grants to all who confess her gentle sway an immortality of pleasure and of profit.

DISCUSSION

P. W. LYONS, Bridgton High School, N. Y.—We should carefully consider the influence of home and local environment upon diction. Subjects for composition should be the happenings of home and school life. My own practice is to have each student prepare and read a paper monthly before the school.

F. O. BAKER, Yonkers, N. Y., desired to ask Dr. Thurber whether each instructor should be at liberty to choose his own authors for class use.

DR. THURBER replied that in his vicinity it had been a time-honored custom to read literature in school work as folllows: first year: American writers; second year: easier English writers—Macaulay, Addison, etc.; third year: Milton and Shakespeare; fourth year: Shakespeare, Milton, and Chaucer.

MISS LUCIA STICKNEY, Hughes High School, Cincinnati, stated that in her school work she had followed the college preparatory requirements, and found a tendency to fall behind the author as a refuge. She disapproved of this method and suggested that pupils must draw upon themselves.

MISS DYE added a suggestion in the line of her syllabus.

CHARLES C. RAMSAY, Durfee High School, Fall River, Mass., advocated a modified use of good text-books in English.

THE ENGLISH ROUND TABLE

ESSAY CORRECTING—CAN IT BE MADE A JOY FOREVER?

BY PROFESSOR F. N. SCOTT, OF THE UNIVERSITY OF MICHIGAN

[ABSTRACT]

The disagreeableness of essay correcting is not due to an intrinsic quality of the task itself, but to the unfavorable conditions under which the task is performed. These unfavorable conditions are as follows:

1. The amount of correction allotted to a given teacher may be more than he can perform easily and well.

2. The teacher who undertakes the task of correction may have no special aptitude for it.

3. The teacher who undertakes the task of correction may have no special training for it. On this account, he may seriously misapprehend its purpose and essential character.

1. The first unfavorable condition is the most serious of all, but it will not be discussed in this paper, for the reason that the data for the solution of the problem have not as yet been collected. No one knows, except in a vague and general way, how many essays a well-equipped teacher of composition can read in a given period of time without fatigue. In all probability, however, too little allowance has been made for this kind of work in the apportionment of the burdens of teaching, and it would seem that in our high schools there is need of more teachers of English. The idea that the special teacher of composition can be abolished and the work of correction distributed among teachers of other subjects is attractive, but fallacious.

2. Special aptitude for essay correction, including a genuine liking for it in all its phases, is a rare quality in a teacher, but is nevertheless a *sine qua non* for the successful teaching of composition. Those who do not possess this gift should abandon the field to those who do.

3. Up to the present time little has been written upon the rationale of essay correction. Its fundamental principles have not been thoroly explored. For this reason, perhaps, the word "correction" is often used in the narrow sense of marginal annotation. A broader view would regard it as including all words of encouragement, suggestion, advice, caution, and criticism by means of which a teacher represses bad habits of expression and sets up good habits in their stead. It thus has a positive as well as a negative side, and this positive side must not be overlooked.

The essentials of good correction are as follows:

(*a*) Correction should be individual. It should be based upon study of the speech habits of the pupil and of the influences which have shaped them. It should take into account character, habits of thought, and likes and dislikes. The good teacher, when he makes corrections, will have in mind the strength as well as weakness of each pupil in his class.

(*b*) Correction should be constructive. Its aim should be to build up good habits of expression. The best correction is stimulating and suggestive. Correction may even promote originality and spontaneity. The difference between suggestive and unsuggestive criticism may be illustrated as follows: Suppose that a pupil has used the word "transpire" in the sense of "happen." One method of correction is to put an abbreviation or question mark in the margin of the essay; but a more suggestive method is to write: "See *Lowell's Letters*, Vol. II, p. 47." The pupil, on turning to the reference, will read as follows:

> TO T. B. ALDRICH:
>
> *My dear Aldrich:* It is a capital little book—but I had read it all before, and liked it thoroughly. . . . . I think it is wholesome, interesting, and above all natural. The only quarrel I have with you is that I found in it the infamous word "transpired." E-pluribus-unum it! Why not "happened"? You are on the very brink of the pit.

To be truly constructive, correction should be given in a kindly spirit. This does not mean that it needs to be sentimental. It may even be severe and cutting, provided there is behind it sympathy with the pupil and a genuine interest in his welfare.

(*c*) Correction should be rational. The teacher of composition should have not only sympathy and good taste, but knowledge. He should be thoroly grounded in the underlying principles of rhetoric, and should know something of rhetorical history. He should be able to distinguish between slipshod work, like that of Richard Grant White, and scientific work, like that of Paul and Jespersen. Such knowledge will help him to avoid the faults of arbitrariness, inconsistency, and hyper-criticism.

(*d*) Correction should be systematic. It should be directed, in the case of each pupil, toward a definite end, which should never be lost sight of. Unsystematic correction, which strikes at random, is futile and wasteful of time. Not every fault in every essay needs to be corrected. Sometimes a single word of encouragement or of explanation will suffice.

(*e*) The teacher in his correcting should exercise common sense. This quality is needed in every department, but in the work of correction it is of especial value. Judiciously employed, it will save the teacher from the besetting sins of narrowness and dogmatism. It will also absolve him from the absurd reproach of knowing too much about his subject.

It remains to show that a teacher who takes this broader view, and who is not hampered by other unfavorable conditions, may find the task of correction not unpleasing. If we ask why any kind or part of teaching is attractive, the answer is, because, primarily, it gives the teacher an opportunity to exercise special aptitude and training for the benefit of society; secondarily, because it enables the teacher to promote his scholarship, to cultivate his taste, to build up his character, to broaden and deepen his views of things. Now, the correction of essays, commonly deemed so trivial, so burdensome, so wasteful of the mental energies, gives opportunity for the attainment of both these ends. Has the teacher a native gift, a special aptitude, for correction? Here is his supreme chance in life. Let him not throw it away. Does the teacher desire to cultivate his scholarship? The door is open. If his interest is in literature, he may so shape his methods of correction that the ransacking of any given field of poetry or prose will be an absolute necessity. If he desires to pursue the study of psychology, he should know that the psychology of language processes is one of the most promising of modern lines of research. If he is interested in the reconstruction now going on of the science of rhetoric, the opportunity is all that could be asked for. The written work of high-school pupils constitutes just the material needed for investigation in this subject.

Finally, that correction carried on in the manner and spirit that have been indicated is a cultivating, liberalizing, and character-building process need not be argued at length. A kind of teaching which brings the teacher into so vital and so intimate relations with his pupils, which calls for so great an exercise of sympathy, insight, and moral influence, need not fear comparison with any other department of instruction. We may, then, briefly draw the conclusion that essay correcting, when there is not too much of it, when one has special aptitude and training for it, when its true purpose and essential character are understood, is not intrinsically disagreeable. It may, in a true sense, become a joy forever.

WHAT PROPORTION OF ESSAY SUBJECTS SHALL BE DRAWN FROM LITERATURE?

BY F. V. N. PAINTER, D.D., PROFESSOR OF MODERN LANGUAGES IN ROANOKE COLLEGE, SALEM, VA.

In seeking an answer to this question, it is necessary to recur to a few of the underlying principles. At best we can hope to reach only a general answer, which must be varied according to different conditions. In education, as in other spheres of labor, true wisdom consists in the proper adaptation of means to the accomplishment of a desired end.

It will be helpful in this discussion to understand clearly what is included in the phrase "essay subjects drawn from literature." The word literature must be taken in its narrower sense of *belles-lettres* or polite literature. It includes all those writings in which artistic form counts as principal element. In general, therefore, we may say that the word literature, as here used, refers to poetry, criticism, fiction, oratory, and even history and science when the artistic element is present in an eminent degree.

The subjects to be drawn from this field are various. The biographical facts of various authors may be presented. The social or physical environment may be studied. Reviews of particular works may be given. Particular characters and events may be analyzed. The literary changes and movements of different periods, and the relation of each work to these changes and movements, is an interesting field of investigation. In short, literature presents an almost limitless variety of interesting essay subjects.

What is the main purpose in having pupils write essays? It is important to answer this question definitely and clearly. There are three prominent ends to be attained in essay writing. The first is an increase of knowledge; and in this connection we may recall the saying of Bacon that "writing maketh a full man." The second is culture, by which we mean the ability to appreciate what is finest and best in human thought and feeling. And the third end is correctness, facility, and skill in the use of language. This last is undoubtedly the principal end to be aimed at in the essay writing of our secondary schools, tho in a diminishing degree with the advancement of the pupil.

It is important in teaching to distinguish between the ultimate and the proximate end of instruction. The general aim of education is to develop a noble manhood and womanhood; to make the student an intelligent, industrious, and right-thinking man or woman. But this end is ultimate, and is apt to be missed when aimed at too directly. The immediate end of each study is to impart knowledge and skill. We study penmanship to learn to write, arithmetic to learn to compute, and composition to learn to compose. We best attain the ultimate end of education by paying attention to the proximate end.

The question has been asked how skill in the use of language may be best acquired. Does it come thru a study of the classics, or a teaching of formal rhetoric, or thru the essay writing of the pupil? The able and enthusiastic teacher may attain good results in any of these three ways. But, other things being equal, the best results will be secured by a judicious combination of all three methods, which stand in an obvious and natural relation to one another. Rhetoric teaches the underlying principles of effective discourse; our classic works exemplify these principles; and composition writing teaches the student to apply them. No matter what may be the student's theoretical knowledge of rhetoric, or the extent of his reading, he will never attain to eminence as a writer without a long and laborious apprenticeship. Here, as elsewhere in our educational work, we may apply the well-known principle of Comenius: "Learn to do by doing."

In seeking a definite and valid answer to the question before us, it is necessary for us first to agree as to the relative value of the humanities, or literary studies, as over against the sciences, or so-called utilitarian studies. This brings us on an educational battlefield, where the fight is still in progress. While sympathizing with the fearless reformers of the past two hundred years, and while rejoicing in the triumphs over an essentially mediæval education, we should be on our guard against the extreme tendencies so often associated with reformatory movements. We should be intelligently progressive, not wildly radical. This moderate spirit, it seems to me, must assign a prominent place in our curricula to literary studies, and, above all, to our mother-tongue.

This position might be defended successfully on plain, practical grounds. Latin and Greek, in spite of the many absurd claims often advanced for them, must be admitted to have at least a great etymological value. French and German, besides their utility in business and trade, open the door to rich literary treasures. And the English language is our ordinary medium of social intercourse, and the instrument of our highest literary achievement. On grounds, therefore, entirely practical or utilitarian, we are justified in making language study prominent in our courses of instruction.

But from the standpoint of educational science there is still another and higher reason for making what we may call the modern humanities, and particularly English, very prominent. It is found in their educational and culture value. The language and literature of a people embody the accumulated results of its life. Every word stands for some intellectual conquest, some new domain, in most cases small indeed, won from the region of darkness. As a student, therefore, acquires a language and appropriates its literature, he ascends toward the highest plane of a whole people's intellectual life. This gives a height and depth and breadth to individual thought and feeling that can come from no other source. Language and literature, as it seems to me, must ever remain our principal means of culture.

One other consideration will prove helpful in finding an answer to our question. The subjects assigned to pupils should be adapted to their stage of development. The day has passed for requiring impossibilities of our children and youth. They should write only on subjects about which they know something, or can find out something. This principle enables us to answer the question: "What kind of subjects should be assigned to the pupils of each class in the high school?" In general, they should write about the things they are most familiar with, and naturally, therefore, about topics drawn in large measure from the studies to which they have given the most attention. But with the increasing age and intellectual power of the student, he may be required to investigate subjects more and more remote from his daily tasks.

Now we are prepared to venture on an answer to the question before us. It is evident from the importance of literature in our educational work that a considerable proportion of essay subjects should be taken from it. Have we any means of determining the proportion more exactly? In every course of study a definite amount of time is set apart for the study of language and literature. This amount varies in different schools. But certainly the proportion of essay subjects should not be less than the proportion of the time allotted in the course to language and literary study. In view of the importance of literature as a culture study, the tendency should be to go beyond this proportion in the upper classes. Perhaps we shall not go far wrong in saying that at least one-third of the essay subjects in our high schools should be drawn from literature.

DISCUSSION

Query: Shall the teacher allow the pupil to write many uncorrected essays or a few that are carefully corrected?

PROFESSOR SCOTT.— Students may write many essays not minutely examined, provided they are carefully filed somewhere, and the pupil knows they are so filed. I have 200,000 essays so filed in a closet near my room.

MR. HERMANNS.— Are essays returned to students?

PROFESSOR SCOTT.— Yes; all essays are returned to pupils before end of school year. All essays of students are filed as long as they are connected with the university.

MR. HERMANNS.— How many uncorrected essays are afterward corrected?

PROFESSOR SCOTT.—All are corrected before end of semester. Student must rewrite everything.

MR. RAMSAY.— Should English be taught as laboratory work, in small classes?

PROFESSOR SCOTT.— Yes, if possible. But this is not practicable in modern schools with their inadequate teaching force.

Further discussion followed by Professor Hurlbut, of Harvard; Miss Charity Dye, of Indianapolis; Mr. Maynard, of Baltimore, and Miss H. M. Reynolds, of Washington.

SUBJECTS FOR COMPOSITIONS: SHALL WE DRAW THEM FROM LITERATURE OR FROM LIFE?

BY EDWIN L. MILLER, ENGLEWOOD HIGH SCHOOL, ENGLEWOOD, ILL.

It is perhaps unnecessary to remark that the choice of a subject has much to do with the success of a composition. In fact, upon it depends usually the value of all that is to follow. It is to a piece of writing what the foundation stone is to a building. If it is crooked or insufficient, the whole structure will be out of plumb. It should not, therefore, be left to chance, but depend upon a sound principle.

The great obstacles in the way of the successful teaching of the art of writing that are commonly encountered in secondary work are two in number. The learner has nothing to say, and he does not know how to say it. A considerable progress has been made toward the destruction of the first of these impediments. The second as yet has scarcely been attacked.

The study of the first question has produced two schools of theorists. The first advocates the plan of drawing subjects for compositions from books. The second is in favor of deriving them directly from life. Both undoubtedly have been productive of good. Each, however, has given rise to certain absurdities and abuses.

In cases where subjects have been drawn from books, the student has at once found enough to say, but there has too often been a temptation to sacrifice originality. The method has also presented opportunities for deception of which the dishonest and the indolent have not been slow to avail themselves. For example, instead of reading Tennyson and reporting their own opinions, they have only said clumsily what Mr. Van Dyke has said well. Instead of reading *Hamlet* or *Macbeth* they have read Lamb's *Tales from Shakespeare*, and copied portions of the same *verbatim et literatim*, tho not usually *punctuatim*, upon their composition tablets. Such exercises may improve chirography, but they are not, in any sense of the word, of the slightest value in learning the noble *ars scribendi*.

From such objections the practice of drawing subjects from life is tolerably free. It teaches accuracy of observation and inculcates a scientific love of truth. It is open, however, to one grave criticism. It does not — and all pedagogical processes should do this — it does not uplift and clarify the conceptions of the student. It leaves the moral as well as the rhetorical conceptions of the learner exactly where they were. A composition on Towser, "How Our Ball Team Won the Pennant," or "A Perfect Summer Day," usually is not remarkable for its educative value. In nine cases out of ten it is a bore to all who read it and a source of weariness and disgust to its author.

Now, all of this is entirely natural. We must not be surprised or angered if we find children unable to write well. The majority of grown people cannot do it. Nine out of ten of the essays read in literary clubs are copied more or less slavishly from encyclopædias. People who do not make a business of writing are overpowered by the sources of their information, when they sit down to write, simply because they have no literary ideals. They are like the mariner who lost his way before the compass was invented. Every clever sentence swamps them with a helpless impulse to commit literary theft. If literary effort is to end thus, it can assuredly be neither pleasant nor profitable.

It is certain, however, that many people have found in writing a consolation and joy, and have written in such a fashion that their compositions have been a consolation and a joy to other people. The question is, How did this come about? The answer, if answer there is, will be found in the early compositions of great writers and in the pages of their biographies.

A partial, but tolerably careful, examination of these sources of information has pretty well convinced me that nearly all writers who have been noted for their manner of saying things have begun to learn the art of composition by a process closely analogous to our prevailing methods of teaching Greek and Latin composition. Consciously or unconsciously they have formed their style by a close study and imitation of former writers. They seem to have begun to write, in the first place, because they had been charmed by something which they had read and had been filled with the thought: "How glorious it would be to write like that!" Spenser's *Eclogues* bear witness to his love for Virgil, Shakespeare's earlier plays to a great admiration for Marlowe, Pope's *Pastorals* to a sort of Theocritean-Virgilian frenzy, and Wordsworth's *Borderers* to a boyish enthusiasm for Shakespeare. Tennyson has left on record the statement that for a time his whole care was to write like Byron. Macaulay was successively the slave of Scott, Cicero, and Burke. Carlyle formed his style by imitating his father's conversation. Nor has this method of composition been practiced by boys alone. Some great writers have never laid it aside. Virgil's obligations to Homer, Milton's to Virgil, Pope's to Horace, and Johnson's to Juvenal are cases in point. The ramifications of the practice are infinite. Every successful versifier for the college paper is a devotee of Dobson or Praed, and the prize story in the college magazine bears unmistakable evidence of being an echo of Howells or Kipling.

The idea that I would impress upon you, then, is this, that here, perhaps, we have a true principle of teaching the art of composition, and that perhaps, with the same method, the average boy and girl, under careful instruction, may learn to do passably well what extraordinary men and women have learned by themselves to do surpassingly well.

The range of subjects that can be treated in the manner suggested is practically unlimited, or is limited only by the range of our literature and the unspeakable wisdom of the committee on college-entrance requirements. I can mention only a few, but those few will each stand for a class and will suggest countless others. The description of the village of Raveloe in *Silas Marner*, for instance, may be made the basis for a description of the pupil's own town. John Burrough's *Roof Tree* will give him a standard by which to evaluate the domestic architecture that he sees. The character sketches in Goldsmith's *Deserted Village* and in the prologue to the *Canterbury Tales* will inspire him to draw pictures of his parents, his companions, the strangers who cross his path, and perhaps his teachers. *Tom Brown's School Days* will enable him to describe his own with fine feeling and insight. If he is of a satirical frame of mind, Johnson's *London* may rouse in him a wish to excoriate the faults of the city in which he lives, especially if he lives in Chicago. But perhaps the best of all fields for work of this kind will be found in the essays and the biography of Macaulay. The vigor and the perspicuity of his style are well within the grasp of the beginner. His unsullied life, his devotion to literature, and his fine simplicity, both as man and author, afford perhaps the best of all examples that we can hold up to our boys to prove to them that a man may cry over Homer and not be a milksop, and read Plato in the original and not be a pedant. His fascinating letters and journals, freer and simpler in style than his essays as they are, are often sufficient of themselves, without suggestion from a teacher, to set a bright boy to work upon similar efforts descriptive of his own experiences. His essay on Addison may well suggest a similar essay on Irving, his life of Pitt a life of Lincoln, or his description of the trial of Warren Hastings a description of the debate between Webster and Hayne. Best of all, and most interesting of all, an attempt may be made to finish his incomplete life of Frederick the Great as he himself would have finished it.

I have reserved perhaps the most important consideration until the end. It is this, that exercises of the sort I have mentioned improve, not only the ability to write, but also the ability to read. No one knows, and no one can know, how hard or how charming it is to write well until he has tried. No one can understand the glory of the simplest of our masterpieces until he has tried, and tried again and again, to reproduce their dignity, their simplicity, the naturalness of their style, their freedom from hypocrisy and from cant. It matters little whether success or failure, in the narrower sense, attend one's efforts. Not failure, but low aim, is crime, and in the broader sense one cannot fail. Provided an honest effort be made, no matter what is put down in black and white, the harvest of purer taste, riper judgment, deeper reverence, and keener delight in things high and good is sure to follow. It may be said, not as a paradox, but as a truth, with reference to this principle, that it is better to have writ and failed than never to have writ at all.

The conclusion which I would emphasize, then, is that for the matter of our compositions we ought, generally, to look to life, and for the manner, generally, to literature. In doing this we shall effect a closer union between our work in composition and our work in literature, shall combat a present widespread tendency to separate the two into distinct courses, and shall discover that the closer relationship thus developed teaches people not only how to write, but also how to read, more skillfully. Finally—and perhaps this is most important of all—it will be seen that the question which we have just been touching upon is part of a much wider and deeper question, and that, do what we may as teachers of composition, we must not expect that our disciples will make any distinct step forward in the power to write until they have made a corresponding step forward in the power to see, to feel, and to know.

DEPARTMENT OF HIGHER EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY, JULY 11, 1898

(JOINT SESSION OF THE DEPARTMENTS OF SECONDARY AND HIGHER EDUCATION)

The meeting was called to order by President R. H. Jesse, of the University of the State of Missouri, in Columbian University Hall, at 3 P. M.

The first paper was presented by Dr. James M. Green, State Normal School, Trenton, N. J., on the questions: "Are there studies that, as constants, should be pursued in some measure in every course in the secondary schools, and in the freshman and sophomore years of college? If so, what are these constants, and what should be the minimum requirement in each in these six years?"

The paper was discussed by Professor Frank Thilly, of the University of Missouri; Principal Charles C. Ramsay, High School, Fall River, Mass.; Dr. Robinson, Rock Island, Ill.; J. M. Davis, superintendent of secondary schools, Iowa; Professor A. T. Ormond, Princeton University, and Dr. Green.

A paper on "The Training of the High-School Teacher" was presented by Professor M. V. O'Shea, University of Wisconsin.

The paper was discussed by Professor Walter B. Jacobs, High School, Providence, R. I.; Miss Connolly, Washington, D. C.; Mr. Roberts, of Missouri; Professor B. A. Hinsdale, University of Michigan; Superintendent George V. Buchanan, Sedalia, Mo. The discussion was closed by Professor O'Shea.

The meeting then adjourned.

SECOND SESSION.—TUESDAY, JULY 12

The department was called to order by President Jesse at 3 P. M.

Dr. Nicholas Murray Butler, Columbia University, New York city, spoke on the subject: "Should the undergraduate curriculum of four years in colleges and institutions be shortened by allowing such freedom of electives in the junior and senior years that a bachelor degree and a professional degree may be obtained in six years?"

Dr. William B. Smith, Tulane University, New Orleans, La., continued the discussion of the question.

In the absence of Dr. Albert Shaw, New York city, Professor A. T. Ormond, Princeton University, spoke on the subject: "Should the undergraduate curriculum of four years in colleges and universities be shortened by reducing it to three years?"

The discussion was continued by President James H. Baker, University of Colorado, and President William F. King, Cornell College, Iowa.

A paper was read by Professor B. A. Hinsdale, of the University of Michigan, on the question: "Is it possible and desirable to form a federation of colleges and universities in the United States similar to the Association of American Medical Colleges?"

The subject was discussed by Mrs. Ellen H. Richards, Massachusetts Institute of Technology, and Professor Taylor, University of New York.

Professor A. T. Ormond moved that a committee of five be appointed to report next year on a practical plan of effecting a national federation of colleges and universities, and to offer recommendations with reference to the same. The motion was amended to make the committee consist of the present officers of the Department of Higher Education, together with Professor B. A. Hinsdale, University of Michigan, and President James M. Baker of Colorado University. The motion was carried.

Moved by Professor W. H. Black, Missouri Valley College, Marshall, Mo., that the colleges and universities of the United States be notified by the secretary of the Department of Higher Education that the question of a national federation is being investigated and to be voted upon at the next meeting of the association. The motion was carried.

The nominating committee reported the following nominations for the ensuing year:

For *President*—Dr. R. B. Fulton, chancellor of the University of Mississippi.
For *Vice-President*—Dr. Elmer E. Brown, professor of pedagogy, University of California.
For *Secretary*—Dr. G. A. Tawney, professor of philosophy, Beloit College, Wisconsin.

JOSEPH SWAIN,
A. T. ORMOND,
Committee.

The report of the committee was adopted.

The department then adjourned.

G. A. TAWNEY,
Secretary pro tempore.

PAPERS AND DISCUSSIONS

ARE THERE STUDIES THAT, AS CONSTANTS, SHOULD BE PURSUED IN SOME MEASURE IN EVERY COURSE IN THE SECONDARY SCHOOLS, AND IN THE FRESHMAN AND SOPHOMORE YEARS OF THE COLLEGE? IF SO, WHAT ARE THESE CONSTANTS, AND WHAT SHOULD BE THE MINIMUM REQUIREMENT IN EACH IN THESE SIX YEARS?

BY DR. JAMES M. GREEN, STATE NORMAL SCHOOL, TRENTON, N. J.

All our theories of education should follow a careful observation of the experiences a youth is likely to meet in life, and what will best fit him for those experiences. So trite a statement as this would seem out of place, were it not for the fact that many theories of education yet seem to be formed from an ideal of what should be, rather than a realization of what is; or are the results of some ambitious efforts at invention. It was not left for man to create the human race, and he can scarcely hope to invent any new laws concerning its development, but must content himself with supplying the conditions for that development.

In forming any scheme of education, we must not lose sight of the fact that our temporal existence is not all of life, but the conclusion is warranted that a proper meeting of the conditions of this life will so completely fit for the life to come that these two ends are in harmony.

The history of education reveals as great a swinging of the pendulum of popular opinion as to what constitutes a good plan of education as in any other department of public concern. The time was when the tutor was the only school. Two things made this school unsatisfactory; one was the expense, the other the lack of contact of the mind of the pupil with other pupils' minds. Hence the forming of the real school which accomplishes not only the ends of economy, but community as well.

A mistaken notion has gained much credence, that when a person becomes a member of a community, he loses his individuality. This can hardly be said to be true, unless, to use an algebraic term, he is losing an unknown quantity. Zoölogically speaking, we must recognize the fact that the various species of mankind are to be classified under the genus homo, and that, as members of the human family, there are many things in common. The special, or individual, grows out of the general, as the branch leaves the trunk, but, as the branch must be recognized as having the sustaining part of itself in the trunk, so a very large portion of every individual is a part of the common human trunk.

The question we are to discuss is: "Are there studies that are constants, appearing in every course of study in the secondary school and in the first two years of college?"

We should precede this question with another: Are there lines of mental activity that are common and continuous, the product of which depends upon the relative training of the mind? If such lines of activity appear and require for their competent discipline a given proportion of time each week during the six years under consideration, then our question for discussion should be answered in the affirmative.

There appear to be at least three lines of mental action that are common and continuous. The abstract general names of these lines are mathematics, language, and history. The proposition is that there is so much of that which is of interest and profit to every individual within these three lines that they should be placed in every course of study, or, in other words, that every pupil should be required to study them.

Mathematics should include arithmetic, algebra, geometry, trigonometry, and analytical geometry.

At first glance, those different names might seem to represent different subjects, but to the psychologist they represent simply progressive phases of the same subject. It is this subject that trains what might be termed the measuring, or absolutely comparing, faculty of the human mind along all lines of conclusion as to material conditions, as well as space relations. When one pauses to consider how much of mental activity is involved in these lines, including, as they do, all financial conceptions, all comparisons of values, all unknown quantities and hypotheses, surely their claim for recognition is established.

It is expected that the pupil will have practically completed arithmetic with the grammar or elementary school, and that this subject, if it receive attention at all in the secondary school, will receive only that attention which will show its fundamental or philosophical relations, the one part to the other. And in these days, when the spiral system is gaining proper respect, the introduction to algebra and inventional geometry is in the elementary school. To all practical purposes, algebra should be taken up with the secondary school, and so much of it taken as is indicated in the ordinary elementary algebra. In other words, exercises should be given in each of the essential forms that will give the pupil a good working knowledge. That which is commonly understood by higher arithmetic and higher algebra, namely, an exceedingly high form of arithmetical or algebraic calisthenics, should be discouraged as consuming too much time, keeping the pupil too long away from those processes which are absolutely essential to progress. Plane and solid geometry, trigonometry, and analytical geometry will require a just proportion of the pupil's time until the close of the sophomore year, and will result in giving him so much of mental discipline, and at the same time acquaintance with processes, as will fit him for all those forms of reasoning which may be said to be sufficiently common to receive the attention of everyone.

Training in language should be continuous from the first entrance of the child in school, certainly until the end of the sophomore year. The terms grammar, rhetoric, English and American literature seem unfortunate by reason of their tendency to create the impression that there are phases to which we can entirely devote ourselves for a given length of time. If the growth of the mind is to be natural, the growth in language must be natural; that is to say, continuous. Language is the power to interpret and express thought. Too often it has been understood to mean the forms for the expression of thought. The writer is not at all in sympathy with a practice that yet prevails to some extent, and formerly prevailed largely, which consisted in distinguishing parts of speech and carrying them thru their modifications, independent of a correlative content of meaning. Figure of speech, order in thought, and sustained composition are all relative terms. One phase of language passes into another as imperceptibly as one shade of color passes into another. It is unfortunate to define the work of the secondary school and the first two years of college in terms of rhetoric and literature, American or English, classic or modern. It is much better to define it in terms of authors. We must regard language as the reservoir of the thought of all the ages on all the subjects of interest to any age. Here are found what the physicist might describe as the varieties of mental energies, known as styles in composition. The course of study mapped out in language should include treatises on the various subjects of most common interest in styles of most marked power. Fiction, poetry, essay, description, analysis — all should come in, as exemplified by the masters, in forms adapted to the child at the various stages of his growth. The writer cannot heartily indorse as anything other than an expedient a practice, which seems to be gaining recognition, of selecting a certain few works in literature for college-entrance examinations one year and certain others another year. It seems to imply that the virtue of an education in this line consists in being able to guess out beforehand what works will be set for the examination, and then preparing on those works. Let us hasten the day when good, wholesome common sense shall actuate us in matters of education, as well as in other matters of life. How well we know that to be educated does not involve necessarily a knowledge of any one author on any one subject. A regular course should be mapped out which would result in power — which, after all, is the only definition of education; and all tests for college entrance or for college exit should aim simply to discover the degree of the existence of this quality. A man who understands testing power in language is perfectly willing to place into the hands of a student the work upon which he is to be examined, knowing that the answers to such questions as he may suggest will expose the real comprehension and grasp and culture he is seeking to test. This work in language should not be limited to the mother-tongue, but should include at least one foreign language. While the speaking value in the foreign language is to be prized, yet the increased power in the mother-tongue, that is to say, the increased culture and power in our own forms of thought that we acquire thru the study of a foreign tongue, would seem to be the greatest value to be gained.

We are asked to name the minimum in each of these constants. It seems rather narrow to specify the subjects that should constitute the minimum. Fortunately for our youth, nearly every one of the great masters in English has written something for the children, as well as something for the adult portion of his readers. We should include something from Longfellow, Holmes, Emerson, Whittier, Kingsley, Anderson, Irving, Scott, Shakespeare, Dickens, Milton, Addison, Macaulay, Goldsmith, Tennyson, Dante, Homer, Virgil. Well-chosen selections from these writers will furnish the growing mind with food from objects of nature, discussions of state, themes of literature of fictitious origin, principles of religion, art, and sociology — indeed, from all that variety of subjects which is yet the common current thought of the race, and without which the mind can scarcely be said to be abreast of the civilization of its own period.

History, like language and mathematics, should be taken up in the elementary course; but, in the very nature of the child's mind, little more can be done than to present the narrative side in an interesting manner. The subject of history should include much of geography, not particularly for the sake of concentration, but rather because you cannot properly study history without it. History, in the true sense of the word, is a real inquiry into the origin, growth, and development of all of our institutions, of whatever character, social, political, religious, educational, or otherwise. We need to study government in its widening stages, from the village thru the municipality and the state to the general government. There appears to be very little value in the independent study of the ordinary texts on civil government, or constitution, or finance, but we cannot intelligently study the development of a country without clearly understanding the important part that has been played by its system of finance, its systems of transportation, and the relations between the local and general governments. We must understand of any nation something of its art, its religion, its literature, its government, its education, and its industries. The history of America cannot be studied intelligently without a study of the history of Greece, Rome, and England. It is true, we need also to know something of France and Germany. It is not the thought that, in studying the history of these foreign countries, we need to enter into all the dynasties, or, indeed, take up that incidental character which may be considered almost personal; but we should certainly be able to inquire into those institutions out of which grew our own. We are to be met in the future by those who would vote upon the popular election of a United States senator, or upon his election by a legislature, as tho it were a simple question of popular choice, rather than one involving a fundamental principle. The same class of people would vote upon a state or national banking system as tho they were mere expedients or establishments of convenience, rather than institutions involving the principles of confidence upon which alone can be based great business transactions. This same class of people will approach such questions as national or individual ownership of railroads and telegraph lines as tho there was involved no fundamental question as to what will stimulate prosperity with a people.

It really seems sometimes, when we look back over our courses of study and our practices under these courses, that we have concerned ourselves least with the questions that are of most value, and given most of our attention to the phases that are of least concern relatively.

What form of municipal government in England and America has been most economical, in the true sense of the word, is a question which, if answered, would help the great mass of people of our country very much. Questions similar to this arise constantly in this subject of history.

I should say a minimum in history should include of Greece, Rome, England, and America at least a study of their foreign relations; leading wars and the results; their constitutional development; religion; educational, social, and commercial development, and their general progress.

If these three subjects are taken up in the manner suggested, it will require a given amount of time each week during the six years to give them the requisite attention, but there will be left opportunity for other equally important correlative subjects, but subjects requiring each a less amount of time.

In closing this necessarily brief paper, I appeal again for these three subjects as constants, on the ground that they concern every life, and that there is in them more for every life than in any subject that might be substituted for any one of them.

DISCUSSION

FRANK THILLY, professor of philosophy, University of Missouri. — The function of the secondary school and the college is to educate human beings. To educate a human being is to fit him for solving the problems of "complete living," or for realizing the highest good. A man is educated when he understands himself and his physical and psychical environment, that is, nature and humanity; when the world arouses in him the normal intellectual, æsthetical, and moral feelings; and when he can react upon it for his own and others' good. He must know in order that he may feel and act, and he must feel and act in order that he may know. But since we cannot influence the emotional and volitional nature systematically except from the cognitive side, instruction will be particularly concerned with the intellect. The young should be trained to perceive, judge, and reason; to analyze and synthetize phenomena; to break the world into pieces and to put it together again in new ways, according to the purposes of the individual; to use the facts as stepping-stones to something higher. Hence we shall do well to select such subjects as have both formal and material value; that is, such as develop the mind and at the same time furnish it with useful knowledge. That knowledge, however, is useful which gives us a deeper insight into the workings of the physical and spiritual universe, and enables us to enjoy and control it. Knowledge, as Paulsen says, that does not make us wiser and more prudent has no value. "Was man nicht nutzt, ist eine schwere Last."

Among the studies meeting these requirements I mention, first, natural science. The study of natural science by the laboratory method develops all the intellectual powers and leads to the acquisition of useful information. "Science," to use Huxley's words, "is nothing but trained and organized common sense." The student learns to see things for himself; to depend upon his own judgment; to be truthful, careful, and exact. Words come to stand for clear and definite objects, and ideas are expressed in accurate language. The contemplation of nature may also be made the source of æsthetical and religious enjoyment, as has often been pointed out. Three years of at least three hours per week should be spent in the investigation of the forms and occurrences of the external world.

But facts must be measured and their quantitative relations discovered. This necessitates the study of mathematics, algebra, geometry, trigonometry, etc. In addition to its practical utility, this subject has great formal or disciplinary value as a means of exercising the powers of abstraction and deductive reasoning. I should, therefore, require at least two years of mathematics.

The world, however, is not a mere soulless machine; it is a spiritual being. Mental phenomena are as worthy of being investigated, and a knowledge of them is as useful, as the facts of the corporeal realm, and only a one-sided system of education can afford to ignore them. An educated man will have some knowledge of the operations of consciousness, of the principles of conduct, of the laws of economic life and government, and of the development of the human mind in history. He cannot gain that insight into the meaning of life of which we have spoken, nor properly perform his duties as a member of society, without understanding these things. A country, especially, in which every citizen is called upon to assist in solving weighty moral, political, and economic problems should pay attention to what we might call the mental sciences. I would recommend a minimum requirement of three years for history, one year for political economy and politics, and one year for psychology and ethics.

We study language to understand the inner, spiritual life of a people, and to give expression to our own states of soul. But language is not merely the outward symbol or instrument of thought; it assists thought. Ideas and their relations are associated with motor processes, words, gestures, facial movements, and thereby fixed in the mind. In learning to speak, we learn to think and feel with our people: words are the frozen concepts and feelings of the race. We should teach the young to read, write, and speak their mother-tongue; place them in possession of their spiritual inheritance. Four years should be devoted to English rhetoric and literature.

But a national spiritual life is not an isolated, independent thing; it is a part of the total spiritual life of humanity. Hence, in order to understand ourselves, we must understand other peoples; and this we cannot do well without a knowledge of foreign languages. Occupation with foreign languages also gives us greater breadth of view; makes us more tolerant and sympathetic. "To learn a new language is to acquire a new soul," as has wisely been said. We should, therefore, study, first of all, the modern languages, the languages of the present intellectual leaders of mankind, German and French, which, owing to the growing international intercourse in science, art, and commerce, have also a great practical value. The minimum requirement should be two years of modern languages.

In conclusion, a place should also be found, at least in the curriculum of the secondary school, for such subjects as drawing, manual training, and gymnastics. All of these exercises assist us in gaining control of the body, in acquiring skill in the use of our limbs. They are likewise a source of recreation and pleasure — the pleasure which accompanies healthful and successful activity — and develop the intellectual powers.

PRINICPAL CHARLES C. RAMSAY, High School, Fall River, Mass., referred to the paper by Dr. Green and to the discussion of Professor Thilly as scientific appreciations of the different branches of knowledge. It is a mistake, said he, to think we can say just what lines of study should be universally pursued by pupils. I would go no farther than to require English and one foreign language of pupils in the secondary course, leaving it to the pupil to elect. Elaborate requirements give the students only the scraps and fragments of what might be a fine feast.

DR. ROBINSON, Rock Island, Ill., spoke in commendation of Mr. Ramsay's view. His own experience would point to a similiar policy. We must, said he, make a minimum of requirement in the essentials, and leave the further choice of studies to the students and their parents. We should adhere neither to a purely elective nor to a pure requirement policy in the secondary schools.

J. M. DAVIS, superintendent of secondary schools in Iowa, emphasized the need of an abundance of good reading for the social as well as intellectual culture.

PROFESSOR A. T. ORMOND, of Princeton University, dwelt upon the need of the student for guidance and direction in the choice of studies. Instead of one rigid requirement for all, we might require one or more of several alternative courses. Very often neither the pupil nor his parent is able to choose wisely. There are certain constants, such as language, history, nature-study, and mathematics, which, in some of their aspects at least, all should study.

Dr. Green renewed the discussion as to constants. It is not the question of electives, but of those studies which ought to be pursued by all students, with which we are dealing. He deprecated the idea that the child is able to choose his own studies. Natural science, manual training, drawing, etc., need to be taught, but they need not occupy the place of constants which continue thru the secondary and the first two years of the higher courses.

Professor Thilly, in conclusion, emphasized the fact that theories as to the arrangement of studies cannot be experimented with as a physicist or a chemist experiments with his elements. The question here discussed cannot be settled upon the basis of experience alone. The considerations of greatest value for us are our knowledge of the mind, the laws of its activity and growth, and our knowledge of the materials of instruction.

THE TRAINING OF THE HIGH-SCHOOL TEACHER

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[ABSTRACT]

The present view of the requirements for teaching, as well in the high school as elsewhere, regards adequate preparation in scholarship and special study of the science and art of education as equally essential. The Committee of Fifteen, reporting upon the training of teachers, rightfully maintains that "If college graduates are put directly into teaching without special study and training, they will teach as they have been taught. The methods of college professors are not in all cases the best, and, if they were, high-school pupils are not to be taught nor disciplined as college students are. . . . . Success in teaching depends upon conformity to principles, and these principles are not a part of the mental equipment of every educated person. . . . . The training of teachers for secondary schools is in several essential respects the same as that for teachers of elementary schools. Both demand scholarship, theory, and practice."

While it is possible to obtain definite statistics respecting the preparation of high-school teachers in but a few of our own states, still estimates by officials familiar with the conditions declare that quite a large percentage of instructors in secondary schools—apparently less in New England than elsewhere—have not had the advantage of a college education. Of the 700 instructors in the secondary schools of Wisconsin 50 per cent. only are college graduates; while of the remainder 27 per cent. are graduates of normal schools and 23 per cent. have not pursued their studies beyond the high school. In Minnesota, out of a total of 376 secondary-school assistants, 255 are college graduates, 76 are normal-school graduates, while 45 terminated their academic career with the high school. The ideal of scholarly preparation on the part of the secondary-school teacher has apparently not made so great headway thus far in Missouri, for only about one-third of her teachers have college degrees, while a greater number have had neither normal-school nor university training.

The factor of meager salary is perhaps more than any other making impossible the attainment of a scholarly teaching standard on the part of instructors in the secondary school. The remuneration for services in many localities is not calculated to encourage thoro preparation, and so to draft college graduates into service. On the average, male assistants in high schools the country over do not receive more than $1,000 per annum, to be very liberal; while in the majority of schools in Wisconsin $800 is the maximum. A woman is thought to be unusually fortunate in my own state when she receives $700, and this appears to be regarded as a generous allowance in Connecticut, New York, and other states as well. These amounts are no greater than, commonly not so great as, normal-school graduates expect to receive. Indeed—and it should be encouraging to the profession of school-teaching to be able to say this—school officials in Wisconsin are not infrequently informed by the presidents of normal schools that $700 is the least sum for which any of their strong candidates may be obtained. So far as my knowledge extends, persons completing their education in training schools, and occupying either assistant positions or principalships in the high schools, are, speaking generally, reaping as fruitful harvests as university graduates in corresponding situations. Under such conditions it is little less than inevitable that young men and women should pursue the path of least resistance leading to the desired high-school berth; and, in view of these circumstances, it is evident that the problem of securing a high standard of scholarship in the secondary school is primarily a sociological, not a professional, one. It needs ever and always to be appreciated that the school, being one of a complex of social forces, cannot rise far above the common level of social evolution.

Reform must strike at social inertia and social hindrances, as they affect education; and very much is being accomplished in some parts of our country today by the social agitation of educational questions. Surely, criticism heaped upon the schools in general and the teachers thereof in particular, without indicating clearly the source of shortcomings, not only fails to encourage amendment, but it seriously aggravates already unhappy conditions.

But the factor of inadequate stipend is not the only one which has operated in the past, and is now at work barring applicants with university diplomas from the secondary schools. The well-nigh hopeless inefficiency, one might almost say imbecility, of a college youth fresh from his books before a room full of high-school boys and girls, anticipating with eagerness, not to say malice aforethought, the performances of the young recruit, has always attracted the attention and stimulated the irony of school officials. One may hear it proclaimed on every hand, if he listens for it, that, at the start at any rate, however it may be at the finish, altho so many college men switch off the pedagogical track before they have caught their second breath that the indictment is doubtless true for the entire race, irrespective of time limitations — one may hear it said that the normal-trained sprinter has better wind and gait than the university man, who during his college course has in reality never heard or seen anything about secondary teaching, and who steps off the first day totally ignorant of the rules of the track or of how he should rightly handle himself. It is sometimes said in apology for the college graduate's empty-handedness that, having passed thru the process of schooling himself, he must of necessity have acquired the art of imparting knowledge to others. This doctrine, so deceptive because it sounds so rational, was advanced long ago by a Massachusetts legislature appointed to report upon the work of the early normal schools; but it met with little approbation at that time — much more than it merited, tho — and has since been entirely discarded by intelligent persons familiar at all with the real problems of education. The situation here depicted is a really serious one, and, until it is remedied by greatly improving the teaching power of college candidates, we must continue to have normal-trained persons in high-school positions. If, as is done in Wisconsin, inducements could be given to normal-school graduates to complete a college course in preparation for high-school positions, the problem would be, in a measure, solved. During the past year over forty graduates from the normal schools of Wisconsin, and a number from other states, entered the junior class in the course leading to the degree of bachelor of philosophy in education; and it is believed that this indicates a significant departure in the training of the secondary-school teacher. But it must be true that, for a long time to come, the majority of teachers in the high schools will not have attended a normal school, and it is with their preparation that we are for the present concerned.

In 1895 the general assembly of Connecticut directed the state board of education to inquire into the condition of the high schools; and, after a painstaking and detailed study of conditions, a report was made last year charging them with deplorable inefficiency, to be accounted for, at least in considerable measure, by the inferior character of the instruction. The report proceeds to say that

> Graduates of colleges, fresh from their books, apply, fortified with recommendations from the president or professors, purporting to show that the holders have been faithful, have attained a high rank in scholarship, and have traits of character which are sure to make them teachers. . . . . The students thus recommended are often really strong

in their college subjects, and particularly qualified in some special branch. None of them are acquainted with the philosophy or history of education, and they are not prepared to teach any subject.

In not more than three or four schools was real teaching, as distinguished from examination, found. Usually a lesson is given, consisting of so many pages or so many examples; the recitation hour is occupied in finding out whether this lesson so given has been learned. A lesson in algebra is assigned, say twelve examples on the thirtieth page, and then the recitation hour is occupied in finding out whether the scholar has "done" them. In a recitation in history the lesson consisted in part of the list of Roman emperors in order from Augustus to Trajan, and the only question possible was whether the right succession and the years were correctly given.

There is no opportunity for skill except in questioning. This questioning, if mere questioning or constant examination be teaching, was often without preparation and aimless. It sometimes hit the mark, and sometimes did not. It is always suggestive of the man who went out to kill a bear and hit a calf. There was little evidence of preparation on the lessons. In Latin classes taught by experienced teachers there was evident as much preparation as results from going over a subject year after year, and if eternal examination on a definite line be teaching, the best teaching was found in the Latin classes.

Without minimizing the evils of inadequate scholarship, still, regarding things as they are, the chiefest defect in the preparation of college graduates for teaching is seen to be the almost utter lack of instructional knowledge, interest, and experience under wise criticism, which results too often in there being less genuine teaching in the high school than in any of the grades below it. But even if college students designing to teach had desired to make decent preparation therefor, they could not until recently have found adequate opportunities in universities anywhere; and they can find these even yet in but a half dozen or fewer institutions, altho the facilities in universities for the study of education, particularly in its scientific and concrete aspects, are being multiplied every year, and the number of students availing themselves of these advantages is increasing rapidly. In 1890 there were reported to the Commissioner of Education 3,414 students, in 114 universities and colleges, pursuing courses of study designed for the training of teachers. In 1895 the list of institutions had increased to 192, and the number of students to 6,402. However, in the larger proportion of these cases the educational studies were fragmentary, and entirely theoretical, the professor of philosophy frequently discoursing a few times a year in a highly abstract and learned manner upon pedagogical themes; altho twenty-seven universities reported having regularly organized departments of pedagogy, with courses of study extending over four years, and leading to degrees equivalent to first degrees given in other departments. In a few instances postgraduate courses were offered; and in all attention was paid not alone to the history, theory, and philosophy of education, but methods of instruction and school organization were considered as well.

Thus the good work moves on apace. Within recent years it has inspired the establishment of independent schools of pedagogy and normal colleges; and in their organization these have, for the most part, recognized the demands of concrete, as well as practical, training. While facilities of whatever sort for the training of secondary teachers are, considering the exigencies of the situation, to be hailed with delight wherever and whenever they make their appearance, yet, in view of the needs of those who train youth, who should be men among men, in sympathy with the varied interests of the community, broad in culture and catholic in opinion, capable of taking an important part in social functions and directing social activities — considering these obligations, it is apparent that the teacher's training should be secured in universities, the home of all activities, the foster-mother of all interests, the best representative of cosmopolitan life. When the teacher's studies are pursued in independent endowments, where he sees and hears nothing but what has concern with his special calling, and where all the minds he comes in contact with are running abreast of one another in the same groove — in such an environment he is only too apt to become a pedagog indeed, such a one as has supplied Shakespeare and Swift and Pope, and many another satirist, with the *motif* for some of their keenest jests. It would not be of so much account whether the teacher was cut on a generous or meager plan, if it were not that his attitude toward life and things has such a tremendous, almost immeasurable, influence upon the tide of life of rising generations, elevating or depressing as his own is exalted or narrowly limited, instilling in the minds of the young just and reasonable, or bigoted and erroneous, views of varied political and social interests, religion, and the like. And the best and surest way to secure breadth in the teacher is to keep him, during his formative period, in an environment where things are built on generous foundations — the university, which, of all social forces, is, or ought to be, the most liberal and comprehensive.

But even regarding all of our opportunities, in the university and elsewhere, for the decent and efficient training of secondary teachers, they are seen to be wholly inadequate to meet the demands. The German people have progressed far beyond us in this respect. Findlay,[1] writing on the training of secondary-school teachers in Germany, says that "students who take a special interest in *Pädagogik* have opportunities for pursuing their inquiries during their university career. The liberty allowed to the German undergraduate of keeping terms in any German university enables such men to go to Halle, or Leipzig, or Giessen, or Jena, in each of which universities elaborate arrangements are made for 'practical' training in school classes, associated with courses of university lectures.

"For more than fifty years every intending teacher, after passing his *Staatsexamen*, has been sent to a gymnasium or other secondary school for his trial year, called the *Probejahr*. He is not paid any salary, but is attached to the staff, teaching for a few hours every week and learning what he can from the head master and his colleagues." In 1890 an important reform law was enacted requiring that all candidates should take a year of actual training in a properly organized seminar, and this in addition to a preceding *Probejahr*.

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[1] Report of the Commissioner of Education, 1894–95, p. 703.

While it may be questioned whether the German plan does not lay too great emphasis upon professional training for all instructors, yet it cannot be gainsaid that the principle upon which it is reared is eternally right, in its fundamental features at least. We in this country need on the part alike of schoolmen and of the public a better knowledge of what professional studies aim to accomplish, and a greater appreciation of their value to the teacher in the secondary school or elsewhere. The dean of one of our great universities recently delivered himself of the opinion that it was not necessary, in order to teach biology in the high school, that one should have studied the science and art of education. He urged the argument that to have mastered the facts to be taught was in itself sufficient to give the candidate power to put those facts into the minds of his pupils — a very ancient contention, and one founded upon a false view alike of the way in which the mind puts off ignorance and adorns itself with knowledge, and of the large purposes of instruction in science or in other studies. Further expressions of the dean revealed the fact that he regarded the study of education as consisting of the parrot-like learning of pedagogical theories and devices for teaching — a chimera haunting the minds of many in academic circles even today. The normal schools have doubtless fostered this widespread illusion, since in the indiscreet years of their youth they magnified to such proportions the petty details of schoolroom methods that the foundation principles were, in considerable measure, obscured. But for the most part these institutions have outgrown this formal stage in their evolution, until now the studies which primarily engage their attention relate to the modes of human development, with the purpose in mind to determine how this may be influenced for good by educational agencies. It is recognized that the process of maturing in childhood proceeds in conformity to certain general laws of growth which reign everywhere in the universe, and which must be consulted in all education alike in the selection of subjects to be taught, and in the order and manner of presenting them. Need it be argued that this constitutes a most profitable study to be pursued by the candidate for teaching, and a most intricate one as well?

But the average layman is inclined to regard this as he does other related matters — that there is nothing so involved or abstruse respecting the maturing of childhood and youth, and simple common sense is sufficiently wise for purposes of instruction. Such a proposition proceeds from a mind full of ignorance regarding the vital matters at issue; and it may be explained by the well-known psychological law, that the less deeply one's vision has penetrated into a field of thought, the less of consequence he is able to descry in it, and the more confident he is that he has acquired full knowledge respecting it. This may be likened to the optical phenomenon, that the farther an object is removed into the distance, the smaller and more insignificant it becomes. If native instinct and common sense were a sufficient equipment for one who fashions the minds and attunes the hearts of childhood and youth, we should, indeed, have had our best parents and teachers among the most ignorant of people, whom nature, and not tuition, has instructed, and so in whom instinct is the guide of life. But every psychologist knows that what is popularly called common sense is in many situations a most dangerous attribute, for it fills the mind with contentment regarding its own limited attainments in particular directions, and gives an assurance in wonted action which is the accompaniment of nothing else than ignorance and prejudice. Common sense (common ignorance would be more appropriate) originally conceived and now nurses the rough-and-ready method of training childhood which is the only recourse of savage people, and which brutes employ in the discipline of their young, but which has lost its effectiveness in the present stage of the evolution of the human race, and which, if continued, simply tends to hold the development of mankind in check, promoting arrest upon the savage plane.

The candidate for a position in the high school, then, should devote his attention, in the first place, to the study of human development, seeking to acquire a sort of natural history of the maturing mind. Modern researches in the biological sciences have taught us that, at least in a general way, every new being recapitulates in sequence, up to the point occupied by his particular species in the scale of life, the principal characteristics of the phylogenetic series; and they have shown, further, that certain influences hasten this process, while others retard it, and even prevent the individual in some instances from passing clear thru the lower orders, bringing them into life thus unformed, or, as we say, deformed. Much evidence from many sources is constraining us in these times to the conviction that the child must reproduce within himself the ancestral record not only physically, but he must live over again, in some degree, the mental experiences of his predecessors in the racial series. And as in embryological development untoward influences may lead to arrest, so in the child's mental growth unwise treatment may cause him to stop upon some platform lower than that which he was designed by nature to attain. Is it not of supremest consequence that the intending teacher should familiarize himself with these primary laws of growth, to the extent that they are definitely understood, so that in his training he may have his course guided by them to the greatest possible degree?

And it seems of particular moment that the secondary-school instructor should study earnestly the principles of human development, considering that the epoch in an individual's career occupied substantially by the high-school period is marked by the most significant and vital phenomena. So great are the spiritual transformations which are now wrought in the lives of youth that many have regarded these events as constituting in truth a second birth hardly less momentous than the first. There are no people so benighted but that they recognize in adolescence the greatest crisis in the process of maturing; and nature has taught them to fill this period with religious ceremonies and practices which are adapted to impress the cardinal virtues of courage, honesty, and obedience upon blossoming manhood and womanhood. This being a season of both physical and mental unrest, of incessant change in ideals, of the advent of a great multitude of strange energies and emotions that need the most careful direction, of the ready formation of settled convictions which persist thruout adult life—considering these and other things, how great is the necessity for the keenest insight on the part of those who are charged with the responsibility of guiding lives thru this dangerous pass connecting childhood and maturity!

In concluding, it scarcely need be mentioned, certainly not argued, that the candidate for the privilege of instructing youth, having diligently pursued studies relating to human development and to the great science of education founded securely thereupon, should have seen the doctrines he has thus acquired tested and applied in actual practice during his probationary period. He should himself try his hand at this, in order that he may be aided by those who have been successful before him, and who may be of service to him by pointing out wherein his practice is not in harmony with his theory and suggesting how improvements may be made. It is surely a crude, sorry way, and one entirely out of harmony with present-day methods in all walks of life, to turn loose upon youth, at a time when it needs the wisest guidance, raw, undisciplined tutors, who, it is hoped, will ultimately acquire skill by lawless experimentation upon innocent subjects.

If, then, the secondary teacher adds to a thoro college education genuine scientific study of human development and the educational laws growing out therefrom, and tests his art in the presence of experts, he has done only that which should be required of him before he is permitted to enter the schoolroom. It is true, of course, that he may not even then be a fit guide for youth, if nature has not been generous in her first gifts to him; but in any event, whether favored or not, he will be more efficient in proportion as he has improved upon and developed native endowments. To attain in the case of every secondary teacher the requirement here presented is largely a social, but partly a professional, task; and when it is met, as it surely must be in the fullness of time, we may, then, have in every secondary schoolroom one

> "Who grows not alone in knowledge and power,
> But day by day, and hour by hour,
> In reverence and in charity."

SHOULD THE UNDERGRADUATE CURRICULUM OF FOUR YEARS IN COLLEGES AND UNIVERSITIES BE SHORTENED BY ALLOWING SUCH FREEDOM OF ELECTIVES IN THE JUNIOR AND SENIOR YEARS THAT A BACHELOR DEGREE AND A PROFESSIONAL DEGREE MAY BE OBTAINED IN SIX YEARS?

BY DR. NICHOLAS MURRAY BUTLER, COLUMBIA UNIVERSITY, NEW YORK CITY

A course of broad, liberal culture preparatory to a professional training is necessary to a complete equipment for life. Only those schools are, in a strict sense, professional which require such a course as a condition of entrance, and eliminate from their curriculum all subjects which do not have an immediate bearing upon professional training. There are but two such schools in America of genuine university rank, viz., the Harvard Law School and the Johns Hopkins Medical School. On the other hand, we have too many schools in America of a semi-professional and semi-liberal character. Many of these are carried on as private investments, which bring large returns to their proprietors. It being to their interest to admit as many students as possible, they often take them without any secondary or liberal training. Consequently the time has come when law and medicine are no longer learned professions. They are often pursued as trades.

The college offers the liberal education that should lie at the foundation of professional training, and it occupies a place midway between the secondary school and the professional school. As such it can only justify its existence by giving a training which adequately compensates for the four years and the expense involved in taking such a course. The truth is, the college has scarcely effected its aim in this country, for the obvious reason that, in order to take a college course, the professional man must wait until he is between twenty-five or thirty years of age before he can maintain himself in life.

This difficulty can be met in cases where the college is part of a university system, and where the range of electives is broad, by permitting the student to elect studies in such a way as to cover the first year of his professional course during the junior and senior years of college. In this way the student shortens his stay in the professional school by a year, without really shortening either his liberal or his professional training.

At Columbia University this arrangement has brought about at least one unexpected and beneficent result. Students who never expect to take professional courses after leaving college are found availing themselves of the opportunity to take the fundamentals of professional training as a preparation for business pursuits. This is especially true of the law courses, altho it holds as well for the other technical subjects. There are certain studies in the mental, the political, and the social sciences which all students desire, because they contribute materially to that breadth of culture and intellectual equipment which it is the aim of a liberal education to produce; and these studies are made available to all students in the junior and senior years.

All this is possible only in colleges which form parts of universities. In the 420 or 430 colleges in America which are not parts of universities the question arises whether the course should not be reduced to three years. This difficult question is the subject of a later paper on this program.

The semi-professional schools, after reducing their entrance requirements to the minimum which enables students to enter them without a preparatory liberal training, are now endeavoring to lengthen their courses so as to extend over from three to four years. I deprecate this tendency. The real solution is not in this direction. The surer way of effecting that reorganization of our educational system which is so obviously needed is to raise the entrance requirements of the professional schools so as to make a preparatory liberal training necessary, and then to eliminate all studies from the professional course which do not have an immediate bearing on professional training.

DISCUSSION

DR. WILLIAM BENJAMIN SMITH, professor of mathematics, Tulane University, stated that the subject was one upon which he had thought and formed definite opinions, but which had not occupied his attention recently. In the few minutes allotted him he would endeavor to state some of his conclusions, but not to ground them with reasons satisfactory to himself, much less to his hearers.

The plan sketched by Dr. Butler had much to recommend it under certain conditions, and in its original, or perhaps some modified, form it might with advantage be tried in other college-universities. However, all such compromises and half-measures offered no final solution, in principle, for the educational puzzle of today, tho they might be useful, instructive, and even necessary stages toward such a solution.

The fact is that our present college-university is a kind of educational centaur, which cannot be dealt with quite satisfactorily in its present form. It involves a certain junction of disparates, a mingling of heterogeneous elements that will hardly enter into combination. In the lower grades of the quadrennium the culture elements are exclusively present, but in the upper these yield place more and more to the professional, or semi-professional. This signifies that there is everywhere an awakening sense of too many years preparatory to professional or university studies proper. To struggle against this tendency to shorten the college course is idle; it will assert itself and accomplish its end this way or that, even if it should have to strand the college course, expelling this latter from the general current of education. For the complaint that our American youth begins his university course too late in life by at least two years is only too well grounded. He is, in fact, at least in the backbone culture studies, more particularly the languages and mathematics, some three or four years behind his English, German, and even French cousins. While he is wrestling with Cæsar, Xenophon, and elementary algebra, they are mastering Tacitus, Sophocles, and conic sections. Measured all round, they will be found to have accomplished at fifteen what he does not accomplish before seventeen. (See a widely read article by Professor Goodwin, in the *Nation*.) Coming to the university proper, to professional or technical studies, at twenty-one instead of nineteen, no wonder he complains, is often impatient, and seeks for short-cuts, and would flank the college curriculum by devious maneuvers. The regular college-bred youth has a real grievance, which it is vain to ignore, disguise, or minimize. The present system amerces him of at least two years of his life, and precisely when years count most. This grievance must be frankly recognized and boldly abated, if the college curriculum is to maintain its time-honored place as mid-highway between the common education and the higher professional and technical culture.

The proper method of overcoming the difficulty in question is that which nature everywhere employs when the continued growth of an organ or organism has rendered it unwieldy or ill-adapted to complicated conditions: the method of spontaneous fission. Divide and conquer. Out of the present college-university must emerge the college and the university, distinct in aim, method, discipline, organization. The many colleges that nowadays are making broad their phylacteries and assuming the functions of universities should abandon such aspirations and content themselves with college work proper—work not less useful, difficult, and honorable. The college class-room calls for a kind of talent different from that demanded in the university lecture-room—different, but not inferior. On the other hand, the real universities in our land should lay aside all undergraduate work below junior and senior years, and no little even of those years, and devote their wealth, their equipment, their energies solely to university work proper, to research, to technical and professional training. Even then they will have all and more than all they can do, for the university supply does not yet equal the demand.

It is only a few years since this same process of spontaneous fission separated finally the college from the academy. Till then the so-called preparatory or sub-freshman department was a regular annex to the college. The process of separation was not always painless, and often met with earnest protest, but it has now been very generally accomplished. A similar dissociation at the upper end of the college course will free it from anomalies and bring into independent being the university in America. The college will then enter upon a career of greatly enlarged usefulness. Its function as the especial organ of general culture, of intellectual discipline non-professional, but fitting for all professions, being more clearly defined than ever before, it will receive wider recognition and enter more largely than ever into the general mental life of our people. Students will be attracted to it whom now it cannot reach. The age of admission being lowered from sixteen to fourteen years, the average age of entrance would be about fifteen, from which to nineteen a uniform and consistent code of discipline may be enforced. But this lowering of the minimum age need bring with it no commensurate lowering of conditions for admission. When high schools cease to prepare for the college-university and begin to prepare for the college proper, for pure culture study, not for studies half disciplinary, half professional, they will find it possible to give better training in less time. At present their energies are frittered away on too great a variety of subjects. Omniscience is their foible, distraction their bane. *Non multa sed multum.* Let them do a few things well. Let them prepare thoroly in English, algebra, geometry, Latin, Greek, with German, French, and science as alternatives; let them seek this kingdom of heaven and its righteousness, and, in due time, all else will be added. The student will then leave college at nineteen quite as well prepared for university professional work as he is now at twenty-one, knowing, indeed, not so many things, but thoroly knowing the few he knows. A great variety of studies is quite as unnecessary to true growth in culture, to true mental development, as a great variety of foods to the proper nutrition of the body.

At present our educational system is chaos, and, thru its lack of consistent organization no less than thru its over-diffusion and lack of accent, it wastes at least two years of the student's life. Everywhere in nature waste is an impressive phenomenon, but nowhere more impressive than in American education. The college of the future will parallel closely, without imitating, on its classical side the German *Gymnasium*, and on its scientific side the *Realschule;* while our university of the future will keep fairly abreast with the universities of Germany.

PROFESSOR A. T. ORMOND, Princeton University.—The method of shortening the college course in years is one which does not commend itself. Such a result is one which we would profoundly regret. Our experience has shown that the four years of college are the most important years in the individual's life, and their value is too great, both to the individual and to society, to admit of such a sacrifice. In place of such a reduction, three steps should be taken: first, all studies in the curricula of secondary schools which are not essential to preparation for college should be eliminated, and the preparatory course be thus reduced; secondly, the electives of junior and senior years should be so arranged that the student can cover the first year of his professional training while in college; thirdly, the professional course should be reduced to a minimum of time requirement by eliminating all studies which do not have a direct bearing upon professional training.

PRESIDENT J. M. BAKER of the University of Colorado emphasized the need of some change in our present system. Young men and young women are continually short-circuiting the college course, in order to get into their life work earlier. It may be necessary to shorten the college course in order to save it. He would not do this, however, if it can be avoided, and believed it may be avoided by a reorganization of our whole educational system.

PRESIDENT KING of Cornell College, Iowa, dwelt upon the fact that the same difficulty exists with reference to the high-school courses as with reference to the colleges. Shall they aim at a complete preparation of the pupil for life, or shall they be simply preparatory to higher liberal education? The time required for complete education might be reduced by making the secondary school simply a preparation for college; also by eliminating from the professional course all studies not of professional value.

IS IT POSSIBLE AND DESIRABLE TO FORM A FEDERATION OF COLLEGES AND UNIVERSITIES IN THE UNITED STATES SIMILAR TO THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES?

BY PROFESSOR B. A. HINSDALE, UNIVERSITY OF MICHIGAN

As this is a new subject, at least in this form, it will be better, as Matthew Arnold might say, to let our intelligence play freely around it and upon it than to advance and maintain a particular thesis. Furthermore, it will be necessary first to form a clear idea of the organization that is set up as a type of the proposed college federation.

The purposes or objects of the Association of American Medical Colleges, as impliedly stated in sections 1 and 7 of Article III of the constitution, are two in number. The first of these sections declares that each college holding membership in the association shall require of every student, before admission to its course of study, an examination in a prescribed minimum of general studies; and the second one, that each college may confer the degree of doctor of medicine during the year 1898 upon students who have attended three courses of instruction, of six months' duration each, provided each of these courses has been in a separate calendar year. The studies in which the student is to be examined are English, arithmetic, algebra, physics, and Latin. The general conditions of membership, as well as some of the working machinery of the association, are shown in Article II of the constitution, as follows:

> SECTION 1. Any medical college conforming to the requirements of the association as expressed in this constitution and in the by-laws of the association is eligible to membership.
>
> SEC. 2. Any medical college desiring membership in this association shall make application to the secretary and pay the annual dues of five dollars. This application shall be accompanied by evidence that the college applying is conforming to the requirements of this association. The application and all evidence and information in relation to the college applying shall then be put into the hands of the judicial council, to be reported to the association, favorably or unfavorably, at the annual meeting, at which time the college shall be elected to membership if it receives the favorable recommendation of the judicial council and the favorable ballot of a majority of the colleges represented in the meeting. The neglect of the judicial council to report on the application of a college shall not be a bar to election.
>
> SEC. 3. Each college is entitled to one representative at all meetings of the association, and to one vote on all questions. The dean of the college will be its accredited representative in the absence of any other delegate.
>
> SEC. 4. The dues are five dollars a year, payable in advance.

Besides the representatives of colleges in attendance at the regular meetings, who are termed active members, provision is also made for associate and honorary members. Moreover, it is the duty of the judicial council, in addition to passing on applications for membership, to investigate and determine all questions of violation of the rules and regulations of the association, and all matters of dispute among the members. The association is purely voluntary, having no coercive authority whatever.

Information as to the working and success of the association does not seem to be very accessible to a layman. It is, perhaps, safe to say no more than that it has thus far proved to be measurably useful and successful. It has now been in operation some seven or eight years.

Now, if a similar federation of colleges and universities be formed, what shall be its functions? Obviously, among them would be included the consideration of terms of admission to the institutions that comprise the membership and the conditions of graduation; or, more definitely, the prescription of minimum entrance requirements and minimum courses of study leading up to degrees.

Argument is hardly called for to show that these are important matters, intimately affecting the progress of higher education in the country. Entrance requirements condition closely the work that students do in college, and this again determines the worth, academically speaking, of the bachelor's degree. It is not surprising, therefore, that these subjects should always be up for discussion. In fact, the first topic has had the floor in a pre-eminent sense for some time past, and promises to hold it for some time longer.

The low value of much that passes in the United States for higher education is a thrice-told tale. The causes of this state of things are disclosed by a glance into the history of our civilization. The oldest of the nine colleges founded before the Revolutionary War strove to maintain the standards of the university-colleges of England after which they had been modeled, but not with complete success; while the later schools of the same group fell to a still lower level. Existing conditions were not favorable to the preservation undimmed of the ancient ideal. A much greater loss came with the colonization of the great West. Here education of all kinds contended with frontier conditions on a grand scale; old traditions were obscured or wholly lost; the material demands of life were as great and pressing as the opportunities for material development were promising; so-called institutions of higher education multiplied far beyond either the needs or the resources of society, with the inevitable result that, to the popular mind, and, it is feared, to some men styled educated, the words "college" and "university" came to mean little more than schools that held commencements, gave out diplomas, conferred honorary degrees, and solicited subscriptions. Meantime the old colleges of the East, instead of expanding their work and diversifying their methods, hardened down into the precise forms in which they had been modeled in the first place.

The potency of better things came with the educational genius of George Ticknor, Thomas Jefferson, and Francis Wayland. The ideas of these great reformers worked slowly in the mass of society, and in the cases of Ticknor and Wayland, in the institution where they had been first promulgated; so slowly, in truth, that President Eliot could say of certain changes made at Harvard College in 1883–84 that they were the "practical completion" of a development which began sixty years before. But they worked nevertheless, and have effected most important changes in our higher education. Still more, important changes in the social conditions of the West, as increasing density of population, growth of wealth, and the slow maturing of civilization, have rendered the elevation of higher education both necessary and possible. Accordingly we have seen in the last twenty-five years a degree of progress in the colleges and universities of the country fully equal to that made in common and secondary schools. Old standards have been raised still higher, and old ideals still more highly polished, while new standards and new ideals have been brought forward. Admission to college has become a more arduous undertaking, and degrees have been made more significant. But, notwithstanding all that has been accomplished in the line of progress, much still remains to be done before it can be truly said that our higher education is fully abreast of the material development of the country; and, when this is accomplished, constant effort will still be necessary to maintain that relation.

Manifestly, therefore, if a federation of good colleges and universities would promote this great end, its formation should be eagerly welcomed by all friends of liberal culture and of high scientific training.

Still more may be claimed for the proposed federation. Colleges and universities have other common interests than entrance and graduation standards. Intercollegiate ethics will bear further discussion, especially in connection with the growth of the new college and university interests. The same may be said of the moral training and welfare of students, a subject that embraces the whole round of college discipline. Particular mention may be made of athletics, which has already led to so much intercollegiate discussion and legislation, and that certainly has not so far been put on a satisfactory basis. Then there is the important and comparatively new field of graduate study, in which some institutions that are ill-prepared to do graduate work are now groping about rather blindly, while still others of the same character are looking wistfully thru the gateway, wondering whether they had better enter in or not. For one I see some danger threatening higher education at this point, viz., the danger that institutions which are not manned and equipped to do graduate work will undertake such work nevertheless. It is not at all impossible that graduate study will be subjected to the same process of dilution that undergraduate study has undergone; perhaps some will see evidence that this process has already begun. To be sure, a college federation would furnish no forcible means of preventing this result, but it might do something to check the mischief by striving to limit graduate study to institutions that are able to carry it on. A high standard could be held up, and the lines of study in which different institutions are relatively strong might be made more fully apparent than at present. Possibly, too, something could be done in another direction, which I shall venture to point out.

As is well known, there is in all well-educated countries a duplication of instruction that at first view certainly seems unnecessary and, therefore, wasteful. Mention may be made of the colleges that comprise the universities of Oxford and Cambridge. In Germany the universities and polytechnic institutions claim to emphasize respectively science as science and the applications of science; but the line of demarkation is generally vague and shadowy, and is often lost sight of altogether. Now, how far this duplication is actually wasteful is not an easy question to answer; but certainly one will not lay himself open to the charge of dogmatism who affirms that, in the United States, much good money could be saved, and the cause of sound education at the same time be promoted, if some reasonable limit could be imposed upon the never-ending process of multiplying colleges and duplicating instruction. Once more, we may inquire whether the colleges and universities that really do graduate work could not profitably consider their common relations, with a view of regulating more wisely than at present the work that they are respectively best able to do, and so of controlling their respective lines of development. Would it not be a gain if these schools should deepen rather than broaden their work, and then unite in a generous effort to turn the attention of students seeking highly specialized instruction in particular branches to the places where what they desire is furnished in fullest measure?

I shall venture to mention another, but a related, topic. Reference is made to the freer passage of graduate students from one institution to another, with a view to receiving the instruction of the ablest men in the several departments of learning and science. While this is common in Germany, it is comparatively rare in the United States; but if the practice is a good one, as it is believed to be, in the one country, why should it not be a good one in the other?

And now, having looked at the principal arguments that recommend the proposed federation, let us look at some of the objections that might be urged against it.

Perhaps the first objection will be that the plan is unnecessary and would prove to be useless. How could it promote the ends that have been described, since it would necessarily be, like the Association of American Medical Colleges, a purely voluntary organization and wholly destitute of coercive authority? As a matter of course, all the authority that it would wield would be moral, arising from argument and persuasion; but that discussion and voluntary co-operation could not fail to exercise a salutary influence will hardly be denied or questioned by those who are fully aware of the part that these agents have played in such progress as has already been made. Good would certainly result from holding aloft where all men can see them two educational norms — one of college-entrance requirements and one of graduation conditions — by an association made up of the leading colleges and universities of the country. It may be replied that, if the federation is to use discussion as its principal instrument, the end can be reached more directly. All the subjects named, it may be said, are now discussed in books and periodicals, in reports of college and university presidents, and in the meetings of existing associations, like the present one. Why, then, the question will be, should it be necessary to devise such an agency as the one proposed? The answer is that the present modes of discussion are more or less circuitous and cumbersome; that we have no distinct and separate forum for the consideration of these important questions; and that the establishment of such a forum would give the questions a separateness, and so a consequence, that they cannot otherwise acquire. Education, we all believe, is the very last cause in the world that should undervalue full and thoro discussion.

A second objection is likely to spring out of the facts of geography. In a country of such magnificent distances as ours, it may be asked how a federation of colleges and universities could be kept alive and active, even if it were once created. The difficulty is no doubt a real one, if a national organization is contemplated. But the federation need not be national at the beginning; it might be better to organize on a smaller scale, in the faith that the limited organization would so abundantly justify itself as to remove all objections of a geographical nature to a larger one.

An objection still more serious, perhaps, is suggested by the unequal educational standards of the different parts of the union, as expressed in the curricula of their institutions of higher instruction. Such differences, while smaller than once they were, and growing smaller still, have not disappeared. They are still considerable, and promise to remain considerable for a time at least. The limitation of the federation to good colleges and universities would not prevent a certain range of difference both in entrance requirements and in courses of study. This being so, some may demand to what practical advantage legislation could be enacted, or discussion be carried on. The objection may be specious, but it is not serious. The institutions interested in the report of the Committee of Ten, and even the institutions represented on the committee that proposed the report, were in no sense equals. The federation would do as the medical association has done—fix minimum entrance and graduation requirements, and leave it to the stronger institutions to carry their own standards as much higher as they might wish. Perhaps the federation would put its standard so high as to exclude a majority of the colleges and universities that make annual reports to the Commissioner of Education. If this were done, the minority might be roughly divided into two classes, a smaller and a larger, that would be separated in the character and extent of their work by a certain interval, but not so widely separated as to preclude their working together harmoniously and effectively.

Besides the advantages accruing to the federation schools, would not many of the schools that were excluded struggle to raise themselves to the level of membership? Still more, would not the exclusion of those that were excluded draw more plainly than it is now drawn the line separating the real colleges and universities from the pretended ones? It is true, of course, that for the most part such exclusion would be effected negatively rather than positively; true, also, that such exclusion would have little weight unless the strongest institutions should enter heartily into the work of the federation; but if that end could be secured, the public would sooner or later find out the reason why some institutions were in the federation, while others were not.

Perhaps it will be objected that any success which the association of medical colleges may have achieved does not argue that the proposed organization would be similarly successful. Medical schools, like law schools, are conducted by a numerous and powerful profession, while schools of liberal arts and sciences are carried on by professors who not only do not constitute a profession, but who have few practical common interests and small *esprit de corps*. It would be vain to deny the pertinency of this argument. It may be said, however, that while the lack of common interests and *esprit de corps* on the part of college and university professors would unquestionably retard the formation of the federation, and, for a time, render its maintenance more difficult, the federation would, in the end, prove to be a powerful engine for the development of such interests and spirit, both of them objects greatly to be desired. Indeed, it is not improbable that some persons will think this consideration the most hopeful sign that would attend the formation of the organization.

So, balancing the pros and cons, we come finally to these conclusions:

1. That there is plenty of needed work which a vigorous federation of good colleges and universities could do.
2. That this work would be done thru discussion and voluntary co-operation. If nothing more, the federation would constitute a sort of clearing-house for the discussion and, it is hoped, practical settlement of important questions affecting the institutions participating and of higher education thruout the country.
3. That there are some serious obstacles to be overcome before it could be got into successful operation.
4. That the subject is one eminently worthy of serious consideration.
5. That it would be unwise to attempt any practical movement until the way has been well prepared by preliminary discussion.

DISCUSSION

Mrs. Ellen Richards, of the Massachusetts Institute of Technology, introduced the discussion by an interesting account of the Boston Alumni Association. Membership in the association was limited to persons possessing a B.A. degree from some college or university of good standing. To determine what colleges and universities possess such standing was a difficult matter, as to which great care has been taken. The association has consequently come to exercise an elevating influence upon the curricula of colleges. In some cases alumni have interested themselves in the elevation of the curricula of their colleges. Occasionally the association has been influential in preventing the granting of charters to colleges which would be a burden to the educational system of the country.

Professor Taylor, of the University of New York, spoke on the requirements of the state of New York for admission to the bar. Twelve years of pre-professional academic training are demanded, and it becomes necessary for the board of examiners to inquire into the standings of the colleges, universities, and other schools where this pre-professional training has been received. A national federation of colleges and universities would be of great assistance in this matter, and might lead to similar requirements in other states.

NORMAL DEPARTMENT

SECRETARY'S MINUTES

FIRST SESSION.— FRIDAY, JULY 8, 1898

The Department of Normal Schools met in All Souls' Church at 3 P. M., with President H. H. Seerley, Cedar Falls, Ia., in the chair.

W. B. Powell, superintendent of schools, Washington, D. C., welcomed the department in a brief address.

The subject of the meeting was the preliminary report of the committee appointed last year on the topic:

The formulation of a course of study setting forth the minimum requirements for graduation from the state normal schools of the United States.

In the absence of Dr. A. G. Boyden, of Bridgewater, Mass., his report on "The New England State Normal Schools" was read by Dr. Z. X. Snyder, of Colorado, chairman of the committee.

Miss Marion Brown, New Orleans, La., reported on "The Southern State Normal Schools."

H. H. Seerley, Cedar Falls, Ia., gave a report on "Normal Schools West of the Mississippi River and East of the Rocky Mountains."

President R. G. Boone, Ypsilanti, Mich., read a report on "The North Central State Normal Schools."

Principal E. T. Pierce, Los Angeles, Cal., was absent, and his report on "The Pacific State Normal Schools" was read by Dr. Snyder.

A general discussion followed, after which the following Committee on Nominations was announced by the president.

W. E. Wilson, Rhode Island; Roland W. Guss, Massachusetts; Z. X. Snyder, Colorado.

SECOND SESSION.— TUESDAY, JULY 12

The department met at 3 o'clock, with President Seerley in the chair.

The preliminary report of the Committee on the Formulation of a Course of Studies was continued.

Dr. N. C. Schaeffer, of Pennsylvania, reported for "The Middle State Normal Schools."

As the committee was to be continued for a full report at the next annual meeting, the following additional questions were submitted for inquiry:

1. How many college graduates enter the normal schools?

2. Should the course of study in a normal school differ in preparation for a grammar-school grade from that for a high-school grade?

What proportion of the teachers are trained?

What proportion go to rural and what to urban schools?

3. Are not the normal schools requiring unnecessary reviews in the common branches?

Are we not driving bright young men and women to the universities, who would prefer the state normal schools, by exacting reviews of the common branches?

Is it wise to provide special courses, preparing teachers for the different grades of schools, specifying the same in the diplomas?

Dr. Z. X. Snyder, of Colorado, gave the report on "The Training School," "The Model School," "The Practice School," in the United States.

A general discussion followed.

The nominating committee recommended the following as officers for next year:

For *President*—Theodore B. Noss, California, Pa.
For *Vice-President*—Miss Marion Brown, New Orleans, La.
For *Secretary*—J. N. Wilkinson, Emporia, Kan.

It was moved and unanimously carried that the secretary of the department be instructed to cast a ballot for the officers as named. The ballot was cast and the nominees declared duly elected.

After the introduction of the new officers, the department adjourned.

F. B. PALMER,
Secretary.

PAPERS AND DISCUSSIONS

PRELIMINARY REPORT OF COMMITTEE ON THE FORMULATION OF A COURSE OF STUDY

THE NEW ENGLAND STATE NORMAL SCHOOLS

BY PRESIDENT A. G. BOYDEN, STATE NORMAL SCHOOL, BRIDGEWATER, MASS.

The normal-school syllabus was sent to each normal-school principal and to the leading superintendents of New England. Nine of these principals and eleven superintendents have replied. These replies are summarized as follows:

1. What should be the minimum requirements for entrance to a state normal school?

Seventeen reply: "Graduation from a good four-years' course of high-school studies." Two answer: "The requirements for admission to college." One answers: "Good health, good looks, sterling character, an active mind, a living interest in the world of nature and of human life, command of the mother-tongue, a love of good literature, and a teachable spirit."

2. What should be the minimum academic requirements for graduation in the following subjects: English and literature, mathematics, science, and history?

In English and literature: "Mastery of English grammar, ability to read and interpret standard English writings, and to know fairly well at least a dozen good books; ability to write correct, terse, vigorous, and idiomatic English." In mathematics: "Algebra and plane geometry." In sciences: "Appreciation of the scientific attitude of mind, a year's vigorous study of biology, a year of physics and chemistry, and of physiography with laboratory practice." In history: "United States, English, and general history—as full study as possible in a good high-school course."

3. Which of the following subjects should be included in the minimum requirements for graduation from a state normal school: Music, drawing, science for the elementary grades; physical training, history, and literature for the lower elementary grades?

"All of these," is the uniform reply.

4. What should be the minimum of professional work along the lines of psychology, pedagogy, history of education, methods in the common branches?

"The fundamentals of each in so definite a manner as to be in daily use, intentionally applied." "From beginning to end of the normal-school courses one or more of these subjects should form a substantial part of the current work. Both theory and practice should be taught." "The method of teaching should be part of all study of subjects." "Psychology, one year; pedagogy, one; history of education, one; methods, three." "Psychology, pedagogy, methods, each one year; history of education, one-half a year."

5. In the employment of a "training school," how should the actual handling of a class by a practice teacher and the observing of expert teaching be proportioned?

"According to the power of the individual normal student." "One part of observation to two of practice." "The time should vary with the circumstances. Perhaps one-third should be given to observation, one-third to assisting an experienced teacher, and one-third to practice with full control of the class." "Four times as much observation as practice until the last term."

6. What proportion of the above requirement in this minimum course should this "training-school" work constitute?

"One-fifth to one-tenth." "One-third to one-half." Most say: "One-fourth." "At least one half year."

7. If you are a state normal-school president, give length of courses offered by your school.

"One year, with special course for college graduates." "One year, with special course for teachers of five years' experience." "Two years, with general course." "Three years, including general course with electives." "Four years, including general course with advanced studies." Most have a course of two to three years, or such time as is needed for completion, without definite limit in time.

8. State branches that are required in these several courses and the time assigned to each branch.

"The studies of the public-school curriculum." "The time given to each in different schools varies so much that one statement cannot cover it."

9. What professional branches are assigned to each course, and what order is designated? Give reasons for preferring this order.

"All the work of each course is professional." "The professional studies are put into each course." "Psychology, pedagogy, method, are contemporaneous and continuous in all the courses; history of education last." "Psychology is a basis for pedagogy and method."

10. What minimum practice in teaching is required to finish the said courses in your normal school?

The reports give a variation in time from six weeks to fourteen weeks in the two-years' course; in the longer course, more than double this time.

11. Is it a function of the normal school to do distinctively academic work?

Unanimously, it is not.

12. Should all or any of the following subjects be taught formally in the elementary schools or the normal schools: bookkeeping, patriotism, ethics, art?

Reports show great diversity of views. Some say: "Yes, all;" some, "No" to all; others say, "All in the elementary schools;" others say, "In both."

13. What criticisms have you to offer on the present state normal school? What can be done to make it more efficient or more practical?

"The normal school is too often an academy." "Lack of scholarship in the graduates. They often have the idea that all pedagogical knowledge is shut in between the covers of their topic-books."

"Make requirements for admission greater; exact more of personality in candidates for graduation; provide better training for normal-school teachers; insist upon their better acquaintance with public schools." "Increase the age of entrance to seventeen years; increase the requirements in science; increase the length of the course to a minimum of three years." "Let superintendents become better acquainted with the normal schools, and the normal-school teachers with the public schools." "Remove the normal schools from all outside meddling, political or personal, and put into them more thoroly cultured and consecrated teachers." "Liberal appropriations for building and equipping practice schools to be controlled entirely by the normal school." "A great deal more practice in the training school is needed." "The practical side of the work, observation of and practice in teaching, should be strengthened in every way possible." "Some scheme of practice teaching where discipline may be tested; knowledge of how to keep a school register." "I should be glad to see teachers returning to the normal school for study after practice. Under strong teachers such classes would prove a power."

THE SOUTHERN STATE NORMAL SCHOOLS

BY MISS MARION BROWN, PRINCIPAL OF NORMAL SCHOOL, NEW ORLEANS, LA.

In the South, as in other sections of our country, the normal school has been a growth, the private normal school preceding the public institution, the locality or city undertaking the training of teachers before the state. The whole educational system of the South has been subjected to "the usual mistakes of friends within and assaults of foes without;" in addition, there have been the vicissitudes and calamities of war, the desolation and privation that fall upon an invaded land; but today every state has a complete system of public schools, frequently somewhat imperfect and lacking in articulation, hampered occasionally by local conditions and traditions, but only in degree, not in kind.

Thomas Jefferson's plans for popular education early found ardent supporters among leading men in the South, but social and industrial conditions were against popular education, for practically there was no school population save in the towns till less than half a century ago. A genial climate and inexhaustibly rich soil, in conjunction with the aristocratic customs and prejudices of its early settlers, induced preservation of large estates cultivated by slave labor, in which muscle was more desirable than intelligence. The whole region was sparsely settled in proportion to area, and in many districts, especially in what is now known as the "Black Belt," the negro population was, and is today, from three to ten times as great as the white. The laboring white population, the poorer middle class, was found only in the towns.

The wealthy planter had a tutor or governess for his children, sending them north or abroad for finishing touches. Shortly after the revolution, Virginia, thru the inspiration of Jefferson, led the van with plans for a state university, the other states falling into line at varying intervals. With the thirties all the states legislated for public education, providing financial support, but the public money was appropriated to private institutions with the proviso that each school educate annually a certain number of indigent children (white). It goes without saying that the indigent children, or their parents, generally preferred ignorance to the stigma of charity scholar. There were frequent protests against this system, accompanied by proposals of plans looking to municipal and state systems of schools open to all children, and under the sole management of the civil authority. In 1839 Randolph Macon College, a Methodist institution, by a resolution of its trustees, established a department for "the training of teachers for the common schools." From 1845 to 1850 the cities established school systems, and the states, at the close of the fifties, had inaugurated some form of state system, excellent on paper, but, from causes already mentioned, halting and ineffective in operation. With the establishment of a state system of education, which had begun with a university and extended itself downward to the elementary schools, it became apparent that the state must undertake the training of teachers for its schools. Here again the cities led, New Orleans establishing, in 1848, the first public normal school in the South. The subject of state normal schools was generally agitated, but with 1860 the period closed.

During the five years that followed school questions were of minor importance, invasion and lack of means closing the schools in many places. In reconstruction times there was much fairly good, and even excellent, school legislation, but the southern voter had had little or no voice in its making, and enormously increased taxation, whereby large amounts were appropriated to schools, notoriously asylums for political friends, along with attempts to force upon the people mixed schools and negro school officials, had so disgusted the people of these states that the public school inspired, for some years, neither love nor respect. By 1880 the South had come to its own again; new avenues of industry were opening enticing vistas; the strong, sturdy generation that had grown up, feeling the lack of the education they had missed in the storm and stress of the last twenty years, had become strong advocates of public schools. Experience with imported teachers, who were frequently undesirable, both as teachers and individuals, while inclined "to point the finger of scorn" at everything south of the Ohio, added to the need of the young people of the South for employment, fostered the desire to establish normal schools. The Peabody fund had assisted, in many places, in establishing normal classes, which, usually only thru reviews of common branches, became "the little light that casts its beams afar." The Peabody Normal College at Nashville, opened in 1875, became the Mecca of aspiring young men and women, and, with its high scholastic standard, sent back into every southern state cultivated teachers, many of whom are today educational leaders. These influences, combined with the realization that the states could raise money to meet increasing demands for school purposes, made the state normal school a certainty, and the early eighties saw the beginnings in nearly every southern state. Today, as far as I can learn, every state, except Arkansas, with a system of one-month country normals, has at least one state normal for white students; many have, or will soon establish, the same for colored students, with industrial features added.

Now the conditions under which these state normals work. There are few large cities; the section is principally agricultural, but discoveries of coal and iron have given an impetus to manufactures; villages have become towns. Up to within the last decade.the elementary school was the only public school within the reach of a large percentage of the rural population; consequently the state normals had to admit on a bare common-school education; hence we find a three- or four-years' normal course, including academic instruction and professional work. Today, in almost every small town there is a high-school department. The majority of these schools, officered by trained and ambitious young men and women, in a few years promise to do excellent work; the elementary schools, thru the efforts of the state normals, having improved rapidly.

In answer to the series of inquiries sent out by the special committee, the majority of principals and superintendents favored entrance requirements based on a high-school course or its equivalent, but about half of these considered it not yet possible, under present conditions; hence, while not regarding academic work as a function of the normal school, or only in so far as might be necessary to methods of teaching subjects, they nearly all in turn advocated an academic course corresponding generally in amount, time, and order, to that of a good high school, and, in a few instances, to a college course. This question arises: Are we not in danger of becoming so hampered and bound by present conditions that they come to seem unchangeable? It appears to me that, when we cling to a grammar-school preparation for normal training, we deliberately lower our standards; further, these young people are in need of the mental development of a three- or four-years' high-school course; the normal offers an equivalent course combined with one and a half or two years' professional work, both taking the time of a good high-school course or a little more. While the South is not alone in these conditions, are we not making the mistake of putting quantity before quality? Granted that the demand for normal graduates exceeds the supply, at the rate we are now turning out graduates from a three-quarter high-school course with a normal-school attachment, are we not running the risk of flooding the country with teachers who may have method, but not sufficient matter to support the method thru trials of years of teaching? By doing academic work the state normal militates against the high schools. For example, Miss X is ready to pass to the high school at M—; instead she elects to go to the state normal, in three or four years returning with a state diploma; her classmates have gone thru the city high school and found it hard work, too; have yet to take two years in the city training school besides. Do they draw no conclusions? Can the state-normal people accuse the city superintendent of high treason if he does not give the preference to their graduates, or if other localities whose superintendents know the conditions prefer other preparation? You may say that the state normal schools aim particularly to prepare teachers for country schools. Then you have declared that the rural schools are not to have the best teachers, and the cities can look elsewhere for trained teachers. Another thing, the normal school is not, like the elementary or the secondary school, for all who want to come, but it is established by the state for a special purpose, viz., to provide properly equipped teachers for its schools, and its authorities must have the best attainable material for making teachers; consequently, the standard they fix will be the preparation to which all applicants for entrance therein will aspire; thru the state normal the state says to prospective teachers: "This is what we demand as employer. Can you fill the bill?"

In the South the state-normal-school problem has two distinct phases: a normal school for white students, modeled as far as possible on the best lines, scholastic and professional; and the normal school for colored students, where elementary professional training must be combined with special industrial work. The latter is distinctively a southern problem, and must be worked out by the southern people as they come to understand more thoroly the industrial status of the negro and his place in our economic progress. In the former, the problems which the southern state normal school has to confront are essentially the same as the normal schools in other states have conquered or are still battling with. Opening their doors somewhat later than their brethren of the North and East, they have had, in their pioneer work, the example of others to warn them of rocks ahead. In attempting to solve the problems that still remain, or that have risen of late years, they again have the advantage in working with those more experienced than themselves.

How will the solution of the question now before us, "The formulation of a course of study setting forth the minimum requirements for graduation from the state normal schools of the United States," affect the southern schools? We have acknowledged that they are, in most instances, greatly handicapped by inability to get a sufficient number of students that have had good secondary instruction, hence feel compelled for some time yet to do more or less academic work; are insufficiently supported financially for the great work they have to do; yet, in spite of all these drawbacks, they are ambitious, feel they must bring the teaching force of their respective states up to the line of march, with the hope some day to be in the van. In each section there is one large city that gives the social and educational tone to a considerable area, not always bounded by state lines. These cities are far from the great centers of our country; their teachers can meet professional brethren only in gatherings like the National Educational Association. The discussions and decisions of the various departments are to our educational public what congressional legislation is to the whole country. Hearing and taking part in them, if only as attentive listeners, they go home and proceed to work their schools up to the ideal standard. How? By first convincing their respective school boards that such is the national educational ideal along this particular line; then thru the board, their public. No one section can be permitted to lay claims to loftier ideals than another, no one region is willing to acknowledge that it cannot or will not measure up to a minimum standard; hence, where there is any educational life—and I assure you the South is alive and striving toward the goal of educational excellence—there will be a stirring in the camps to meet the call. The stamp of national approval means a great deal—much more than one who is not behind the scenes can realize. Those whose work has long been systematized, to whose problems a solution seems in sight, must, of their superior advantages and experiences, show the way to those whose pathway has often to be hewn thru the thick forest of public indifference. Therefore, with a definite line of minimum work marked out, normal-school faculties can present to their constituencies a mark below which none must fall, beyond which each community will strive to pass—a common standard which all normal schools will recognize, the first step toward a really national and homogeneous system of public education.

NORMAL SCHOOLS WEST OF THE MISSISSIPPI RIVER AND EAST OF THE ROCKY MOUNTAINS

BY PRESIDENT HOMER H. SEERLEY, CEDAR FALLS, IA.

This report covers a region where the schools are generally less than thirty years old, and where most of these are not more than half that age. These schools are in states where institutional life is making great progress, and where populations are sparse and much mixed as to national origin and language. The chief problem in some of these states is elementary education. The teachers deal with conditions, not theories, and the unifying of the people in language, in interest, and in sympathy is the principal educational work attempted. The need of elementary teachers in this region is very great. The salaries paid are small, the standard of teachers' certificates, generally, not very high, and the attempt to supply a known positive demand is the problem laid at the door of the normal schools for immediate solution.

Hence the environment has a marked effect upon the conclusions of this study, as obtained from correspondence and investigation. The state normal schools found in this vast territory, while young and few in number, are yet the best-patronized and the most cordially supported by the general public of any kind of school found in the same field. These schools are very sensitive to public demand, are very close to the public interest, are easily touched by public legislation of many kinds, and are naturally responsive to public expectancy as far as possible. Most of these states regulate the qualifications of a public-school teacher by statute, and determine, therefore, in a way, the minimum requirements of the standard course of study to be offered. This has a marked effect upon the limitations of the schools of this order, and gives them a hold upon the people that is hard to comprehend by those who do not perceive these fundamental conditions. As a consequence there will be no fixed course of study, no possible settled adjustment of requirements, no certain and definite agreement, that can be reached, since change must go on, progress must come, modification must follow, and development must continue for many years to come.

In making this study, I asked the opinions of three classes of educators: (1) college and university presidents; (2) superintendents of the larger and more important cities; (3) the presidents of these several schools. Of course, in such a multitude of counsel, many opinions were obtainable, but there is, after all, a large unanimity of opinion in the entire number consulted.

I. THE COLLEGE AND UNIVERSITY VIEW

Most of these opinions show that the normal school ought to be a part of the educational system of a state, and that a student who enters a normal school ought not to be prevented from continuing his studies afterward in the college or university. It seemed, therefore, that there ought to be complete unification in the educational system, whereby a student might turn aside for professional education as a teacher, and yet neither lose much time nor be unfitted for taking a higher education, should he conclude that his future promise encouraged it. Most of these prominent men report that their experience with normal-school graduates was of such a character that they could state that these became the best students and developed into superior and influential scholars. Some, however, thought they were inferior to good high-school graduates, and considered the turning aside to pursue a normal course first, and afterward taking a university course, as not a good plan. It was also suggested that so much academic instruction should be eliminated from a normal-school course, and the schools be made more professional in character and in training. Others also state that the mental equipment and the training given by the normal school are frequently too meager and too restricted actually to fit a person for the large and broad work he is expected to do. Some of these universities grant two years' full credit upon a college course to normal-school graduates of full four-year courses, and are well satisfied with the results of the experiment, while others say that they are not more than fitted to enter upon freshman college work after graduation from a full normal-school course. These universities assume that the province of the normal school is alone to furnish teachers for the elementary grades of public schools, and that it has no suitable preparation for high-school work.

II. THE CITY SUPERINTENDENTS' VIEW

This second class of educators see the normal school chiefly from the work done by its graduates in the schoolroom under their supervision. They are quite willing to say that students are too generally admitted to the normal schools before they are properly prepared in scholarship or in experience in life to enter upon professional studies. They assert that persons graduate frequently from normal schools who are not fitted by nature to govern or instruct the young, and that the normal-school managers knowingly permit this practice to continue. They further object to the elementary courses at all, as the reputation of the school is generally dependent upon these less prepared and less thoroly instructed graduates. Protection to the public would require that a difference be made, and that this needless confusion in what constitutes graduation should not be allowed to continue to mislead the public and increase the number of those who are frequently incompetent without knowing it themselves. Not a few think the normal school should demand an entrance scholarship equivalent to that demanded by the college, while they just as strongly recommend that methodology and devices should not be considered as a substitute for careful instruction in the principles and doctrines of education. There is a tendency, they think, to make teaching a trade, rather than a profession, and they place most of the cause for this growing evil at the door of the normal school which tries to instruct its students in the mechanism of management and teaching before they are prepared in scholarship, age, or experience in life to view educational ideas and methods from the true and proper standpoint.

III. THE NORMAL-SCHOOL VIEW

The presidents of these normal schools are reasonably a unit on most questions sent out by the committee, tho varying in many important particulars. They think the entrance requirements of these schools cannot be regulated by faculty enactment, but by the conditions that exist in the state where they are located. In the most of these schools two standards of entrance prevail: (1) high-school graduate scholarship; (2) the actual teacher scholarship, determined by the license requirements, established by law. They take it that a legal teacher ought by right to be able to enter a teacher's professional school and get the instruction he needs to prepare him to do better and more remunerative work.

The academic requirements for graduation involve about the same amount of matter as regards kind and degree. Most of the schools offer four-year courses beginning with the standard set by the customary teachers' license, and abridging this time for high-school graduates, according to their scholastic qualifications. The lines offered permit some differentiation in language, in science, and in history. There is, usually, a Latin course, an English course, and, at times, other courses, like science courses, etc., where variations are allowed to suit the individual tastes of students, the assumption being that either one of these courses is a reasonable preparation for public-school work. All of these schools regard vocal music, drawing, physical training, science, history, and literature for the lower grades essentials to graduate from any course, tho they differ very much in the way courses should be worked out and the instruction accomplished. The professional work assigned has more or less variation. Psychology, pedagogy, history of education, methodology, are all recognized as having place, but the attention given to each separate topic has wide divergence, all the way from formal definite lessons to incidental instruction in the training-school conferences. The general theory that prevails is to make some professional study required every term in the four-years' course; tho at least one school has almost all the professional study in the final year of the course.

The practice school is found in every school but one in this region, and that one will establish it as soon as circumstances permit. The use of the practice school varies according to the province of the school individually. Where the need of scholarship in teachers being trained is the chief function now demanding attention, practice is at a minimum. Where the demand for competent teachers takes the form of the carefully trained teacher, there practice is more emphasized. The limits are from sixteen weeks' to two years' practice, according to opportunity and apparent necessity. Some have no specific limit, except such as is necessary to satisfy the practice department, the same as students are required to satisfy other departments of the school, they being allowed to pass as soon as their work shows creditable status and good promise. This seems to be the coming plan, as there must be much variation in individual needs where the students are of all classes—college graduates, high-school graduates, teachers with well-known and successful experience, and beginners in the elementary principles of the business. The quantity of practice and observation is likewise variable, some making much of observation and some very little. All quite generally regard practice as more important than observation, but some consider them as of equivalent value in the work of training a teacher.

The majority of the schools seem to regret that so much of the time and strength of the work must be given to academic instruction, but it is apparent that they also believe that the kind of academic work absolutely necessary to a teacher is not yet done by other kinds of schools, particularly in the elementary branches. At present they think it is useless to hope that this work will be done elsewhere. Some of the most experienced and most thoughtful evidently believe that the time will never come when academic instruction will not be the proper function of a normal school established and maintained by the state. But the spirit of these schools is favorable to a higher standard of entrance, to a dispensing with the briefer courses now offered, to giving less academic instruction if it can be done elsewhere, to catering less to a low conception in the public mind of what an elementary teacher may be in scholarship and skill. In addition, they suggest that the training school is the vital point to be improved, that the teaching of devices and methods as a substitute for principles and developmental ideas should be dropped, that today too many weaklings and inferior persons are graduated as representatives of normal-school work, that the scholarship obtained is frequently so lacking in necessary thoroness that the graduate seems incapable of meeting the public demand. They advise, also, that the normal school should naturally become a part of the general educational system by giving proper recognition to the high schools for their academic work, and, at the same time, obtain such recognition from the universities as acknowledges the importance and the value of teachers' professional studies as a fair substitute for an equivalent amount of work exacted for the standard bachelor degrees.

THE NORTH CENTRAL STATE NORMAL SCHOOLS

BY PRESIDENT R. G. BOONE, STATE NORMAL COLLEGE, YPSILANTI, MICH.

About the middle of April there came to my office a circular letter from our president, H. H. Seerley, calling attention to the meeting of the Normal Department and the contemplated report of the committee, of which President Snyder is chairman, and which was appointed at the Milwaukee meeting, upon the "formulation of a course of study setting forth the minimum requirements for graduation from the state normal schools of the United States."

A little earlier a communication from the chairman, Dr. Snyder, was received, assigning as my field the states of Michigan, Ohio, Indiana, Wisconsin, and Illinois.

My instructions were to "get out whatever form of syllabus I wished, in order to obtain the desired information," and formulate it for a preliminary report.

Immediately the following questions were sent out to twelve normal schools, supported by the states assigned to me, to the five state superintendents, to fifty city superintendents, and to nine other persons prominent in educational matters. Here follow the questions of this circular letter:

1. What should be the minimum academic requirements in the following subjects: English, history, mathematics, and sciences?
2. What and how much work in psychology and pedagogy?

3. What should be included in the way of method in the common elementary branches?

4. Of the following subjects which should be included in such minimum requirements: (1) music, (2) drawing, (3) science for the elementary grades, (4) history for the elementary grades, (5) physical training?

5. Should the course include also the method of presenting any or all of the subjects enumerated in the last paragraph?

6. What and how much attention should be given to the history of education?

7. In the employment of a "training school," how should (1) the actual handling of a class by a "practice teacher" and (2) the observing of expert teaching be proportioned?

8. What proportion of the total requirement in this minimum course should the "training-school" work constitute?

9. What professional work, if any, in secondary branches should the state norma school attempt?

Soon after the circular letter had gone to seventy-eight persons, another letter came from the chairman, followed by a package of syllabi, which all members of the committee alike were asked to use. This outline consists of the thirteen questions that have already been presented to you by those who have preceded me in this discussion. Immediately these questions were mailed to the names of the list noted above. Of this syllabus five of the thirteen questions are the same as the corresponding ones in the earlier circular sent out.

To the first request eleven replies were received; to the printed syllabus seven returns were made. Altogether there were eight responses from seven normal schools, six from city or county superintendents, one from a college president, and one from a retired educator; a total of eighteen returns in all out of an aggregate of seventy-eight requests.

All this is recounted, not at all by way of criticism upon anyone, either members of the committee interested or those who were asked to lend the committee their wisdom. It is not presented as any explanation of the meagerness of the comparison offered. It certainly is not offered as a body of facts from which to draw reliable conclusions concerning minimum normal-school courses in Ohio, Indiana, Illinois, Wisconsin, and Michigan; much less, conclusions concerning such courses in general. The brief preliminary statement can serve at best as a text only or pretext for saying some things about minimum courses and elementary professional training, and conditions of admission and requirements for graduation, that need to be said, I conclude, whether they be borne out in all their details by the experience of the institutions comprised in these five states or not. You will not, therefore, hold the schoolmen of this section responsible for all I shall say, tho I shall try to speak what I conceive to be their sentiment touching this question, as I have been able to discover it.

Besides the answers to the syllabus questions, I have examined somewhat carefully the catalogs of the two schools of Illinois; of Oshkosh, River Falls, Whitewater, and Stevens Point, and the prospectus of the West Superior school, Wisconsin; and a catalog of the Indiana school. What I here say you will understand, therefore, is gathered from the two sources.

1. Of eight who answered the first question six would make graduation from a reputable high school the requirement for entrance to the proposed minimum normal-school course. One of these thought that to have completed the second year of a high-school course might possibly be sufficient; and one said, "eventually" graduation from a high school. Of the other two, one would require the holding of a third-grade license to teach, and the other would make the condition of entrance to this minimum course the same as is required for admission to a high school.

The tendency of most schools is so to raise the standard of entrance as practically to prepare no teachers for the low-salaried places of village and rural schools. Of course, the question is raised at once whether it is wise to attempt to give the technical training — even its rudiments — to applicants who have had no more than an elementary-school training. I can only raise the question and leave it.

2. Concerning the requirements for graduation in English, mathematics, and history, there were but four answers received, and these show great difference of opinion. One would require two years in each of the four subjects; one would have twice as much mathematics as of each of the other three; and one would apportion the four groups in the ratio of nine parts of science and mathematics to four of English and history. The average preference, as gathered from courses of study as well as the direct answers to questions, is for the dominance of the sciences over the humanities, so far as these four groups are concerned.

3. The question as to the use that should be made of music, drawing, science, physical training, and history in the elementary grades was answered by thirteen. All the writers would include all of these branches in even a minimum training course, except in a single instance where history for the grades was omitted explicitly. One regards physical training as standing first in importance, the order of the others remaining as given above. Two would make the normal-school work in elementary science and history for the elementary grades as method work only.

Thruout the answers, and in most published courses of study, there seems to be what to me stands for a painful lack of appreciation of the value of history, and story and literature, and art in its various forms, as a means of child training. What is there in our own nation's past, or in that of the race; in human achievement and thinking and living; in fine arts and industrial skill, that may further the civilizing and socializing process in the child and make him fit for high-grade living as a man in the complex social life about him? Is there a neglect of the humanities by teachers in fitting for work with children and youth?

4. About professional work—psychology, pedagogy, history of education, and method exercises in the elementary branches—there is shown the greatest diversity of opinion. Here again thirteen answers were received—five from persons connected with normal schools, six from those actively engaged in school supervision, and two from educators of large experience, but not now connected with elementary or secondary schools. Six do not mention history of education, and one would have none of it, regarding it as greatly overrated as an aid to right teaching. Another considers a knowledge of three or four leading reformers as sufficient for this kind of professional training. The average time set for the subject is a half year.

All would have psychology taught even in the most elementary courses. The amount varies greatly, however, as does the importance attached to it as a guide to instruction. One would include in a minimum course the general steps in pedagogy only, leaving psychology to later and longer courses. One would have of psychology such works studied as those of James, Sully, and Dewey—for their general and not specific value, however—not mentioning pedagogy in this course at all. The average time put upon psychology, pedagogy, and the history of education, together, is one year. The average time given to all professional subjects, including the method work in elementary branches, and excluding the training in practice and observation schools, is two years, or about one-fourth of the total course. Most actual courses, as published, show less than this, and the shorter courses considerably less. Probably for these courses it should be less; right habits of thinking and respectable scholastic attainments are very important for any grade of preparation. There is always danger in giving technical knowledge a setting in mediocre attainment. And nowhere is the danger greater than in the teaching process.

5. Concerning the relations and proportions of teaching and observation in the training school, answers were received from fourteen persons—seven of these from normals schools. Of the fourteen, four give no figures. The average of the estimates of the other ten would make two parts of the training work teaching and one part observation. Three of the four answering indefinitely would have the work "mainly practice;" and one "almost altogether practice"—experts "inspecting the work once in two weeks." Two would have the time given to practice four times that allowed for observation.

While in the midst of this writing a letter comes to my table whose spirit was just the reverse of that shown by these statistics. The writer, a normal-school man and a president, says: "I am planning a rescue of the model department of our school from the steady encroachment of practice work upon it, as a school of observation during the recent years of rapid growth." "Formerly," he said, "one-third of the classes were conducted by student teachers; then I yielded to one-half; now more than three-fourths of the classes are in the hands of student teachers."

* * * *

"I purpose to restore some due balance in the department, so that there shall be a fair proportion of the work done by grade teachers in every grade." What that fair proportion is the writer does not attempt to fix in figures. My own estimate would put the value of expert teaching and observation much higher than most reports show. The practice, thru the actual handling of classes, the being personally responsible for the behavior and thinking and interest of pupils thru several successive days in the working out of some lesson, must not be valued lightly; but it should follow and be conditioned by the most careful planning, and observation by pupil teachers, and a sound insight of the ends to be attained, and the relative worthiness of the several possible ends, the value of available means, and the conditions of their right using. Following upon accurate knowledge of what is to be done, and how it has been well done, less practice is requisite. To put a young practice teacher in charge of a class whose work is inspected and criticised not oftener than once in two weeks, or once a week, is scarcely better than the process by which some of us learned to teach, altogether without inspection. The normal school should save the intending teacher from the necessity of blundering.

REPORT OF SUBCOMMITTEE ON THE STATE NORMAL SCHOOLS OF THE PACIFIC COAST

[COMPILED FROM ANSWERS TO QUESTIONS IN CIRCULAR LETTER]

BY DR. EDWARD T. PIERCE, PRESIDENT STATE NORMAL SCHOOL, LOS ANGELES, CAL.

Seventy-five circulars were sent out on the Pacific coast. But twenty answers were received. These, however, were from some of the most prominent educators. Answers to the questions were as follows, so far as the differences of opinion can be noted:

1. The general consensus of opinion is that the requirements for entrance should be a full high-school education.

One says: "An ability to write accurate, clear English, knowledge of main facts in United States history, power to read intelligently and to use books intelligently, with an understanding of the various essentials of the whole." One thinks that the requirements should be "entirely dependent on the school and the student-producing community." One thinks that nine years of school work will make a good preparation for those who enter the normal school. One says that the preparation is immaterial so long as the school holds students long enough.

2. The minimum standards for graduation are indicated as follows:

In English and literature, one says, "as high as possible." In mathematics, "completion of plane and solid geometry."

There are, however, the following scattering answers: "Should be able to compose and write good English and know something of the best authors;" "definite knowledge of science of language—critical study of masterpieces in poetry and prose;" "eighty weeks plus reviews for methods;" "acquaintance with American authors and such as are studied in a first-class high school."

In science, some of the answers are: "Three years' work;" "eighty weeks and reviews, with special reference to methods;" "twenty weeks each in botany, zoölogy, physiology, and chemistry, and forty weeks in physics, with careful laboratory work in those subjects."

In mathematics: "The amount required by the best high schools;" "three years' work;" "one year each in algebra and geometry and twenty weeks in arithmetic;" "thru quadratics and plane geometry."

In United States history: "High-school requirements;" "at least two years' work in modern European history and one year in American history and economics."

3. With one or two exceptions, there is a consensus of opinion that all of the subjects under this head should find a place in the normal-school curriculum.

4. The most who answered this question as to the minimum requirement for professional studies said: "One year for psychology, one year for pedagogy and history of education, and one year for methods." One said, "twenty weeks in each;" another, "at least one-fourth of the time devoted to the whole course." One superintendent says: "Not too much of it; a good, general education, common sense, love of work, and some experience are necessary qualifications of a good teacher, and are not wholly supplied by these studies."

5. The consensus of opinion seems to be that one-fourth of the time devoted to the work of the training school should be given to observation of expert teachers and three-fourths to actual teaching. The opinion seems to prevail that, instead of devoting one hour per day for a part or the whole of a year to teaching a class, the student teacher should have charge of a room and teach the entire time for a number of weeks.

6. As to the amount of training-school work that should be required in a minimum course, the answers range from one period per day for half a year to one-fourth of the time for the entire course. In its relation to the whole of the professional work, the opinion prevails that one-third of such work should be actual practice. It should be not less

than ten weeks with entire charge of a room or forty weeks of one period each day.

7. Three answers from California normal schools say: "Four years for graduates of grammar schools and two years for graduates of high schools." The Washington state normal schools give three courses of two, three, and four years.

8. The course of study for the California state normal schools is:

English, from 120 to 140 weeks. Subjects: grammar, composition, word analysis, literature, reading, rhetoric.

Science, 160 weeks. Subjects: botany and microscopy, zoölogy and microscopy, physics, geography, chemistry, physiology, geology, and astronomy optional in place of chemistry.

Mathematics, 110 weeks. Subjects: arithmetic, algebra, geometry, and bookkeeping.

Professional studies, 120 to 130 weeks. Subjects: psychology, history of education, practice teaching, pedagogy, school law, and school economy.

Miscellaneous, 100 to 140 weeks. Subjects: drawing, sloyd, clay modeling, penmanship, music, physical culture, history, and civics.

10. The minimum amount of practice in teaching as required in the several schools is twenty weeks, one period per day, in the San José school; forty weeks in the Los Angeles and Chico schools.

11. In answer to the question, "Should normal schools do academic work?" most say: "Yes, until the supply from secondary schools is large enough to make the school purely professional."

12. Most answers approve the teaching of bookkeeping, patriotism, ethics, art.

13. The following criticisms and suggestions are offered for the improvement of normal schools: "Need of wider and more thoro culture training as basis of professional training." "Raise requirements for admission." "Raise standards for admission; receive mature material with culture basis, and make them strictly professional schools." "Pupils not fitted to be teachers should be dismissed peremptorily." "Not all graduates are good teachers — such as are not fitted for the work should not be granted a diploma." "None; I think the requirements will be increased." "Should be open all the year; should have advanced course for its own and college graduates; should give degree for both courses." "Do away with all other modes of certification of teachers." "Higher standards and right to prune." "Higher scholarship for matriculation and graduation." "They take pupils without sufficient literary education; too much politics in selection of teachers."

DISCUSSION

President John W. Cook, of Illinois, urged that requirements for admission should not be allowed to bar country pupils from entrance to normal schools. He said they are more likely to return to those schools, and better fitted to teach and manage, than others are. He gave it as his experience that the class of pupils coming from the country, on account of greater maturity and the different environments of childhood, are fully equal to high-school graduates in power to master the most difficult parts of the normal curriculum.

Dr. F. J. Cheney, Cortland, N. Y., asked if the investigations of the committee led it to believe in the practicability of uniformity in all the normal schools. To this question no good reasons could be shown for an affirmative answer. He believed that in his school the strongest pupils were not high-school graduates, and he could name examples to sustain his position.

Miss Bosworth, of Oklahoma, said that country pupils would have an experience of such practical and varied character as to fit them to meet the different requirements of life better than those brought up in the city.

Dr. J. M. Green, Trenton, N. J., thought we ought to put ourselves into the attitude of those whom we seek to serve, that we might better appreciate their demands and criticisms. He believed there ought to be two distinct courses for the two classes of pupils that sought admission. High-school graduates and pupils from the country schools ought to be admitted, but, not having the same preparation, they ought not to be required to follow the same course.

Dr. Z. X. Snyder, Greeley, Colo., did not believe the normal school ought to be closed to any persons who would make real teachers, but we ought to exact something of them when they begin with us. He believed, too, that the great mass of educational men demand that pupils should not be called from the high school to enter a normal school until they have finished their course.

Will S. Monroe, Westfield, Mass., said that he thought all persons should have a high-school course, or its equivalent, before entering a normal school, and that there should be but two courses for the different classes.

President H. H. Seerley said that he had the two courses demanded, and they satisfactorily met the requirements.

The question of allowances by the colleges for work done in the normal schools was largely discussed. President Seerley and Dr. Snyder believed that affiliation with colleges would solve all difficulties that arise in this respect. President A. R. Taylor and others who had had experience in this arrangement believed the opinion well founded, and urged the normal schools and colleges to complete such arrangements, so far as possible.

In continuing the discussion, a speaker from West Virginia said he thought a thoro preparation to teach requires a longer time and more settled habits of thought than the normal schools can require. He proposed that the normal school prepare its graduates for college, and that they be given there a course leading to a pedagogical degree.

Mr. Bryan, of Pennsylvania, thought the committee had been troubled by the diversity of practice which it had found; he thought that, instead of seeking for that which seems to be most common, we should seek for that which is best. He believed there should be but one course, and high-school graduation should be required for admission. The normal school should then be followed by a university course.

THE MIDDLE STATE NORMAL SCHOOLS

BY N. C. SCHAEFFER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, HARRISBURG, PA.

"Life is not worth living during the month of June," was the exclamation of a superintendent engaged in the state examinations which mark the close of the school year. Either for this reason or because the syllabus of questions was unsatisfactory, not half the letters of inquiry were answered. Whenever there is educational progress, the leading minds cherish ideals which lure them forward and upward, but which at the time cannot be realized. Some of the replies indicate that an ideal state of things was floating before the minds of those who wrote them. Others indicate that the replies were based upon existing conditions. The former came mainly from those who are engaged in supervision; the latter from those engaged in actual normal-school work. The replies indicate that most of the answers were prepared with the haste which results from the necessity of getting thru a large mass of official details; hence there is danger of attaching too much value to the conclusions which may be drawn from these replies. Evidently it would be a mistake to publish any results at this stage of the investigation. A historical investigation of the courses of study, as they now exist, would be helpful in showing why the standard of academic and professional qualifications has not been more rapidly advanced by the most efficient of our state normal schools. The normal-school problem in the middle states has been solved according to the peculiar needs of each state and of the several localities in which the normal schools are situated. In Philadelphia it has become possible to insist on a course of four years in the high school before the candidates for the vocation of teaching are admitted into the normal school's two-years' course of professional work. Many sections of the Keystone State are not supplied with high schools; the private schools do not furnish the required preparatory instruction in the common branches; hence every one of the thirteen state normal schools in Pennsylvania maintains a course preparatory to the regular professional courses, which are two, three, and four years in length. The replies to the questions sent out agree in demanding such a knowledge of the common branches as will fit the student for professional studies. In the state of New York the admissions are limited to persons recommended by the school commissioners. In New Jersey a satisfactory examination is required for entrance to the normal schools. In Pennsylvania the doors are open to everybody, yet many teachers never see the inside of a normal school. It is assumed that the normal schools exist for the greatest good of the greatest number. I find that the number of schools which a state maintains has some effect upon the curriculum of study. Maryland and New Jersey sustain but one normal school each. It is natural for the authorities to place the standard high enough to secure, as far as possible, the preparation of the teachers who will occupy the best-paid positions. The larger the emoluments in sight, the more thoro is the preparation which can be demanded of those who are candidates for a profession. As a necessary result the rural schools in sparsely settled districts seldom get a teacher who has graduated from the normal school. In New York, where the training classes supplement the work of the regular normal schools, and in Pennsylvania, where the entrance examinations are held for purposes of classification, there is more prospect of reaching the rural schools in sparsely settled communities.

From one point of view, training in pedagogy should be made possible for everybody. Herbert Spencer claims that the science of education should form a part of the training of every youth, because the duty of rearing and training children sooner or later devolves upon nearly all of them. The facilities possible for this kind of study is the limit to the good which can be done by the policy of admitting everybody into the normal school. The accommodations in Philadelphia have compelled the authorities to limit the admissions to about four hundred, because the city feels unwilling to bear the expense of training teachers for schools outside of the city. Only those who graduate from the high school with the best standing are now admitted; the others are excluded. A bright girl trained for school work, and understanding the science of pedagogy, is an attractive personality; and when a worthy young man says to her, "Come, let us establish a home," she replies in the affirmative. The vocation of teaching loses a member, but the nation gets an addition to its cultured homes; the loss is more than made up by the gain. A former opponent of normal schools explained his conversion by exclaiming: "I have noticed that, if a rich man's daughter spends a session or two at a normal school, she returns home believing that teaching school is the most honorable vocation on earth; there must be something in the atmosphere of a normal school to work this change of sentiment in the girl who formerly imagined that school-teaching was a convenient way of pensioning needy spinsters." This enthusiasm for education, which Cavour on his deathbed wished for Italy, is one of the factors that has helped to make us victorious by land and by sea, in the workshop and in the marts of trade. Hence our contemplated report should fully discuss the policy of one state normal school with a high grade, and many normal schools with an approach to facilities for all who seek admission. I have not received sufficient information to speak with confidence about the views of educators outside of my own state, but there is greater unanimity among Pennsylvania educators than I had expected.

In the mathematical requirements for graduation there is practical unanimity upon arithmetic, algebra, and plane geometry. A few add solid geometry and trigonometry. In the sciences there is almost unanimity in favor of requiring botany, zoölogy, chemistry, and physics. Several add descriptive astronomy. The knowledge of English literature is made to embrace the study of several, if not all, the classics demanded by the Association of Colleges in the Middle States. Dr. Brooks says: "In English there should be ability to write an article with correctness, showing a good command of language, with correct spelling, punctuation, capitalization. In literature a fair knowledge of different great writers, including principal works." Most of the replies are in favor of requiring more or less instruction in music, drawing, science, history, and literature. There is a divided opinion on physical training.

I have found it difficult to sum up the views in regard to minimum requirements in psychology, pedagogy, history of education, and methods of teaching the common branches. Some replies use the year, others the hour, as a unit of measure. The amount of work in these branches which the pupil is required to do, outside of the recitation, varies in different schools belonging to the same state system. One professor teaches by lectures chiefly; another employs the printed page. I doubt the policy of trying to fix a minimum. The student will always seek short-cuts to the castle in which he is forever fortified against the attacks of the examiner. It is specially vicious to measure by weeks the requirements in observation of good teaching and in the practice which should follow. The weaker schools are apt to allow this requirement to supplant the standard of excellence which should form the basis of graduation from the normal school. We here encounter the trouble which confronts all professional schools. Wherever the reputation or the income or the success of a school in any way depends upon the number of students who attend and graduate, there is a temptation to lower the bars at the two ends of the course of study. In schools which have a fixed income from state revenues or annual appropriations this temptation is reduced to a minimum. It afflicts the colleges quite as much as the normal schools. The necessity of getting endowment compels the authorities to let down the bars for the admission of rich men's sons, and finally to let down the bars at the end of the course so as to get rid honorably of these scions of wealth. The information which I have been able to gather is very far from being satisfactory. The supply of printed questions reached me at a time when the duties of a state superintendent in Pennsylvania oblige him to live all over the commonwealth. I have reported in this fragmentary way, in the hope that suggestions and corrections would enable me to complete my task. It is the truth I am seeking; hence I shall welcome criticisms, corrections, and suggestions from every quarter.

THE "TRAINING SCHOOL" IN THE UNITED STATES

BY PRESIDENT Z. X. SNYDER, STATE NORMAL SCHOOL, GREELEY, COLO.

Opinions are very divergent and diversified on this Department of the Normal School. Some contend that it should be a model school exclusively—a school in which the pupil teacher should see nothing but expert work. These same persons think it is vicious to have this pupil teacher teach under the severe strain occasioned by the critic teacher—which strain, it is claimed, disqualifies her from putting forth her best effort. Others think it should be a school in which the pupil teacher would have entire charge of a room full of children for a large portion of a year, only to be interfered with when serious blunders are being made.

Between these two extremes diversified views are held, no two having just the same; yet a majority of the schools have about the same line of work.

There is a difference between a model and a practice school. In this discussion, training school is used to comprehend both model and practice school, or model and practice work.

A training school may have model work and not a model school. Using the word model in the etymological sense, it means a measure—a unit of measure of a good school, or unit of measure of good work. Wherever there is expert work done there is model work.

The ideal training school is one in which there are both a model and a practice department. The model is where they have reached the highest efficiency—where the management of the school, the training of the children, the results, and the teacher are everything that is to be desired. The practice department is where the pupil teachers are to do their work under proper criticism and supervision, and where they will all aim to realize the ideals formed in the model; and, while they will not reach them in the practice school, they will leave with ideals that will have a high potential for realization. The practice school, then, is a place where the pupil teacher energizes her ideals of a school, in her efforts of realization.

Now, to have these two distinct departments in the same building is a very difficult matter; but it can be carried out where a normal school has an opportunity to use the schools of the town in which it is located. The next best thing to this is to have the model and practice departments as one. This means to have some model classes taught only by experts, and have the expert teachers do work with the classes necessary to demonstrate good work.

To carry out either of these plans a good organization is necessary.

Organization is an arrangement of parts for a common purpose. The purpose in the training school is: (1) the preservation of the thing organized; (2) to give an opportunity to the pupil teachers to prepare for teaching; (3) to take care of the children in the school.

The parts involved are the superintendent, the critic teachers, the pupil teachers, and the children.

The superintendent should be a man of very ripe practical and theoretical experience. He should be practical in that he can teach ideally children of all grades; he should be practical in that he has a keen insight into child nature in its various stages of development, and that in his practice he recognizes these stages; he should be practical in that he has an abiding and loving sympathy for children in their various activities, and that he personally knows how to direct these activities; he should be practical in that he is full of child life. He should be so constituted as to look upon a child as a blessing in this world; he should see it in the sense that it is the stuff out of which are to be made men and women, and that the mission of the teacher is to live with children. He should be professional in that he is conversant with the various systems of education that have developed at various times in the movement of civilization; he should be professional in that he should be familiar with and have a broad grasp of the history of philosophy and its bearing upon the philosophy of education; he should be professional in that he can wind out of these educational and philosophical systems the stream of educational development as it flowed down thru the ages; in short, he should be a witness of all time; he should see all knowledge and effort as a unit and a unifying process. Out of this preparation will come his power to organize, to manage, and to develop a useful training school. Out of this preparation will come his power to make and inspire teachers with energized ideals, the realization of which will be the development of the truest character of the children whom they teach. This will be their success—their reward. I believe in this kind of man being at the head of a training school. A strong man inspires and begets confidence and respect. A strong mind, a large heart, a gentle spirit, and the unified expression of all these are a tremendous influence in shaping the course of young persons, in inspiring them with high ideals, in begetting within them respect for what they are going to do, and impressing them that they should put their life and soul in what they do. The people, the profession, the children, all demand this man at the head of the training school. In this day of intense and profound training for the work in hand, nothing else will do. Nothing else will make the people and the profession respect the school. Nothing else will eliminate just criticism.

The critic teacher should be a scholar. Scholarship commands respect. Nothing can take its place. It is the reserve power of every great teacher.

Go to history; observe the educational activities about us, and wherever you find a great teacher you will find a scholar. She should have wide professional training. The history, the philosophy, the science, and the art of education should be at her command.

She should be a student of children. A little child should be sacred to her. She should see it as a thought of God—his most sublime thought, yet expressed in flesh and blood. She should know how and love to live with children. The tenderest feelings of respect and love should exist between her and the children and pupil teachers.

She should know and love nature. She should see in it divinity. She should have the subtle ability to have the pupil teacher and the children see in it truth, beauty, and good, and to lead them to love and enjoy these graces. A soul grows to its ripest fruition when in the forum of truth, the gallery of beauty, and the temple of good.

She should be a lover of the best literature. Literature is soul. It is the life blood of the race spirit. It makes soul. It represents the history of humanity. She should be able to adapt it to the hungry, growing child. It should be an intellectual and moral feast. She should be able to present it hot and steaming. The best sentiments gotten from it should be manifest in the child's activities. To accomplish this is rare skill. A critic teacher must be able to do it.

The critic teacher should be a lover of art. Art is the effort of the human mind to preserve the record of the sentiments. The art sentiment should be strong in the training school. All must be interested in it. The superintendent, the pupil teacher, the children, and the critic teacher must all be interested. The critic teacher must be the moving spirit in her room. An appreciation of art in nature, art in literature, art in poetry, art in pictures, art in painting, art in architecture, art in sculpture, should all be cultivated. The pupil teachers should be led to carry this art spirit with them into their schools. It should be seen in the schoolroom decorations, in the dress, in recitation, and everywhere.

One of the very essential characteristics of the critic teacher is the power to give severe criticism and have the pupil teacher receive it in the student spirit, to have her feel that it is a great privilege to have the opportunity to have the critic present. The life of the training school should be that the pupil teacher is sorry when she has finished her work. Great teaching power, gentleness, firmness, simplicity, sympathy, and the consciousness that in all she knows just what she is doing, are the elements that beget the proper spirit in the practice school.

The pupil teacher should have a thoro training in the common branches — common-school subjects — together with good general training in the subjects of the secondary schools. She should have had sufficient observation in the model department of the training school or of model work to gain a fairly clear insight into good teaching and the proper management of children. She should have had the opportunity of observing some work in the practice department, and of taking part in the critic conferences made up of those practice teachers whom she observes teaching and of the observers, and conducted by the critic teacher in whose room the work has been done. There should be a seminar in which the superintendent gives pedagogical meaning to the observation work and to the theoretical professional work, as psychology and general pedagogy. A keen insight into the nature of children should also be acquired. The entire life in the normal school should be such as to put the pupil teacher in sympathy with the child life. With this preliminary preparation the pupil teacher is ready to enter upon her work in the practice department.

Here she enters into active teaching. She should, at least, teach one hour a day, five days in the week, for one full school year, together with an opportunity to have charge of an entire room for a sufficient length of time to prove her ability to manage a school. During this time conferences with critic teachers and seminars with the superintendent are held regularly.

The critic work has to do with the immediate work of the class from all standpoints — those of management, preparation, recitation, and the application of pedagogical principles. The work of the seminar will have to do with the discussions of all pedagogical questions arising in connection with the work in the training school. It is here where all the work of the institution is correlated and concentrated so as to be available for actual practice. It is here where general method finds a place. It deals with the courses of work for the different grades — the development, correlation, concentration, and arrangement of the same.

Another feature of the seminar is that it is a center of stimulation for the study of the children. More real, helpful, systematic child-study grows out of this seminar than out of any other center of activity in the institution.

The children are a very important part in the organization of a training school. It should contain the kindergarten and all the grades below the high school. The kindergarten should be an integral part of it. It should not be something unique in itself. The work should be so gradually developed that there would be no break. In short, where the one ends and the other begins should not be capable of being discerned. All pupil teachers should be required to study this training school as an organic whole. They should be required to study the philosophy of it from the beginning to the end — should by all means go out with the kindergarten spirit as the spirit that characterizes and permeates all true education.

The arrangement and organization of the children should be of interest. The organization of the child is the first consideration. Nothing should take the place of its interests.

The kindergarten children should be arranged in groups based upon their development. These groups preserve their identity thru the training school, but vary in individuals. The criterion of the group should, as a rule, be equality of development.

As these groups move into the primary department and onward, they will integrate into classes — two classes constituting a room. The pupil teachers work with groups, classes, and with rooms of children. To be able to manage a room of two classes is the best criterion of the ability of a pupil teacher to manage a school. To be able to conduct a recitation well with one class while the other is preparing a lesson, and doing it well, is good evidence of success.

A school conducted on this plan brings out and develops the two kinds of attention — active upon the part of those reciting, and passive upon the part of those preparing. It is under this sort of régime that the teacher develops a kind of omnipresent influence. Some have this to a marked degree. Their influence is everywhere without effort — in the recitation, in the preparation, and on the grounds. Without an opportunity to develop this power there is no certainty in the product you send out.

In the organization of the training school, as in any other organization, harmony is the binding element of success.

Superintendent, critics, pupil teachers, children, and all the institution should be in complete harmony. The center of life in the institution should be the training school. It should be the center from which emanates the professional life and toward which it gravitates.

To this end the professors in the normal department proper must be in sympathy with the spirit of the training school. They should have an opportunity to do work in it. This is the surest way of developing the right spirit.

Another way to centralize the interest and efforts of the entire institution is to constitute the faculty of a seminar, in which the most vital questions pertaining to the training of the child, and the relation of this training to their respective departments, are discussed. This will lead each department to show the relation of its work to teaching, to the training school, and to the unification of the work of the normal school.

DISCUSSION

PRESIDENT T. B. NOSS, California, Pa., approved the ideas of Dr. Snyder's paper, and thought no teacher was fit for his place in a normal school who could not prepare his pupils to go out and do correct work from the beginning.

PRINCIPAL W. E. WILSON, Providence, R. I., thought he had never seen a complete practice school, but said the Oswego, N. Y., school came nearest to his idea. He thought there should be two separate schools, one a school for observation, the other a school for practice. These should be entirely separate. The pupil should first make observations under favorable circumstances, and take notes which should be afterward discussed. After this, practice under a qualified training teacher. The observation school should not be called a model school, but a school of good, tho varied, practice, so that the observer shall not be led to imitate any one individual.

Dr. Snyder said, in answer to a question, that his paper was designed to represent what schoolmen want. It was not so much his own thought as a setting forth of what he had gathered.

Professor J. N. Wilkinson, Emporia, Kan., questioned whether we could get over all the inherent difficulties of the situation. For instance, the teacher of a normal class may go into the practice school and criticise the amount of work done in his department, and the manner of doing it, from his own point of view, not making allowance for the difference of circumstances, nor of the other requirements of the school.

A. S. Downing, Albany, N. Y., said that it is the function of a normal school to prepare a pupil for successful teaching, but not every teacher is prepared for all teaching. He asked the question if it is not possible to give practice work of different grades to different pupils.

Miss Lucy E. Moten, M.D., Washington, D. C., said: "In our medical school the pupils have to use the scalpel and do the dissecting themselves." She thought the practice school should be like the dissecting room — pupils should first learn what is to be done in a theoretical and observational way, and then do the work for themselves.

A. R. Taylor, Emporia, Kan., said he could not certify to the success of graduates until his school came nearer to the ideal. He sometimes recommended a teacher for one position, and a little experience would show that a different place would be better for her. It is a difficult problem to fit teachers to their places.

Dr. F. J. Cheney, Cortland, N. Y., said that an experience of seven years in placing teachers had taught him that the point made by Mr. Downing could be met, and that graduates could be classified by the normal schools when they are sent out. He thought Dr. Snyder's paper one of very great value.

Alexander M. Rowe, Little Falls, Minn., said he could not make of all his pupils such teachers as he could recommend. He would reduce the teaching of the poorer teachers to a minimum and give the better teachers a maximum. In this way the poorer teachers will be discouraged and take up some other work.

Dr. John W. Cook, of Illinois, thought that often a pupil will make a failure at first and afterward become distinguished. He would reverse the order of minimum. He also believed in imitating, especially in the beginning of a teacher's work. He did not believe in laying down such hard and fast rules as some had advocated. He said there was nothing that we should say we would never do.

DEPARTMENT OF MANUAL AND INDUSTRIAL EDUCATION

SECRETARY'S MINUTES

INTRODUCTORY NOTE

Inasmuch as among the officers and leading members of the American Manual Training Teachers Association a desire has been gaining strength for a union of that organization with this department of the National Educational Association, arrangements were effected for holding the sessions of the two organizations in Washington on alternate days in the same room, and invitations to attend one another's exercises were exchanged. Following a well-established procedure, and as the result of the able and devoted labors of the officers of the visiting organization (Professor C. R. Richards, of New York, president; H. G. Bryant, of Newport, R. I., vice-president, and W. E. Roberts, of Cleveland, O., secretary and treasurer), assisted by Professor J. A. Chamberlain, director of manual training, Washington, D. C., a very valuable and quite extensive exhibit of pupils' work in manual training had been installed in the room in the Masonic Temple where the meetings were held.

FIRST SESSION.—MONDAY, JULY 11, 1898

The session of the department was called to order at 3 P. M. by President E. O. Sisson, of Peoria, Ill. Owing to some changes which made the session's program unexpectedly full, the president, refraining from reading the address which he had prepared, occupied time only for a few remarks, bearing upon the program and business of the meeting, in which he expressed especial gratification at the presence of the American Manual Training Teachers' Association, and recognized the valuable services rendered by it to the cause of manual training in the few years of its separate existence.

The committee on nominations was appointed as follows:

Professor C. R. Richards, Teachers' College, New York, N. Y.
Professor Charles A. Bennett, Bradley Polytechnic Institute, Peoria, Ill.
Professor W. R. Lazenby, State University, Columbus, O.

The first paper was presented by President J. L. Snyder, Agricultural College, Mich., on the subject "Education for the Industrial Classes." It was discussed by Superintendent E. Mackey, of Reading, Pa.

Mrs. Ellen H. Richards, of the Institute of Technology, Boston, Mass., read a paper on "Domestic Science as a Synthetic Study for Girls." Written discussion was presented by Miss Perla G. Bowman, professor of domestic arts, Ohio State University.

The subject "Manual Training in Horticulture" was treated in a paper by Professor William R. Lazenby, of the State University, Columbus, O., and discussed by Professor George T. Fairchild, Berea College, Ky.

The report of the committee which was appointed at the Milwaukee meeting, pursuant to a resolution by Professor George A. Robbins, providing for an inquiry into the causes which help or hinder the introduction of manual training into schools, was read by Professor Robbins, chairman, who has borne almost unaided the labor of the investigation, and to whom credit for so valuable a report is chiefly due. This report is presented for publication in full.

The department adjourned at 5 P. M., to meet at 2 : 30 the next day for the transaction of business.

SECOND SESSION.—TUESDAY, JULY 12

The meeting was called to order by Vice-President W. R. Lazenby, at 2 : 30 P. M.

The Committee on Nominations presented the following names for officers for the coming year:

For *President*—Superintendent Judson E. Hoyt, Menomonie, Wis.
For *Vice-President*—Miss Perla G. Bowman, Columbus, O.
For *Secretary*—Professor Charles A. Bennett, Peoria, Ill.

On motion, the chairman of the committee was instructed to cast the ballot of the association for the persons named. This having been done, the chair declared the nominees duly elected.

Professor C. R. Richards in a brief speech presented the desirability of a union in a national organization of all the forces that are working for the establishment of manual-training instruction in elementary and secondary schools, named some objections to the present organization of this department which has led to a separate organization by the manual-training instructors, and pointed out how these might be removed. Thereupon he moved the following resolution:

WHEREAS, It is believed that the interests of both manual-training and industrial education will be better served by the bringing together of all workers in both fields at the annual meetings of the National Educational Association; and

WHEREAS, These two fields have come to have distinctive character and interests which are widely different, the clear and sufficient presentation of which is greatly impeded under the present single organization and program; and

WHEREAS, A separation could be made without disparagement to either, but with obvious and considerable advantages to both; therefore be it

Resolved, That the officers of this department be, and are hereby, instructed to present to the Board of Directors the request of this department for separation into two departments, to be known respectively as the Department of Manual Training and Domestic Arts, and the Department of Industrial Education, and, further, to take all steps necessary to the establishment of said separate departments, and preliminary to the next meeting of this department, to which they will make report of their acts with recommendations.

The resolution was seconded by F. W. Wilde, of Baltimore Polytechnic Institute and passed by the meeting by unanimous vote.

On motion, the department adjourned.

J. E. HOYT,
Secretary.

PAPERS AND DISCUSSIONS

EDUCATION FOR THE INDUSTRIAL CLASSES

BY PRESIDENT J. L. SNYDER OF THE AGRICULTURAL COLLEGE OF MICHIGAN

Speaking in general terms, the industrial classes include farmers, mechanics, and all other persons who work with their hands for a living. During the earlier history of this country they composed nearly the entire population; but, as the country grows older, wealth increases, educational advantages multiply, the demand for trained men in the professions and other callings necessarily lessens the proportion of those engaged in industrial pursuits. While it is not an easy matter to draw a line separating the industrial classes from those who might also be properly registered in other classes, yet it is not difficult to conceive that the great body of humanity, perhaps not less than 75 per cent. of the entire population of this country, do now, and will continue in the future to, "earn their bread by the sweat of their brow," and therefore must belong to the class of citizens now under consideration.

The great success and rapid development of this country have been due very largely to the integrity and energy of the industrial classes. Gathered from the best countries of northern Europe and sifted over and over again, the first settlers of this country were an exceptionally worthy class of citizens. This sturdy stock, and those who still follow like occupations, have been and still are the bone and sinew — the stay of the nation. They are the court of last appeal in times of peace, and settle all great questions at the ballot box. In times of war they carry the muskets and charge on the ramparts of the enemy. Their courage and patriotism have never been questioned. They have made this country what it is. They felled the forests, cleared the land, opened up the great mineral wealth, built the railroads, and made the cities. More than this, they have produced much of the energy and brains that have brought success to the learned professions and other callings. But they have not always gotten their own. Others have reaped where they have sown, and garnered the products of their labor. Much of the wealth which they have produced has been gathered in by the few who have had the time and skill to lay schemes, corner markets, and corral legislatures.

The future of this country depends more largely upon the industrial classes than upon all other classes combined. If they are intelligent, industrious, and contented, the country is safe. They are in the majority; they hold the ballots and will vote them when the proper time comes. In the past the rural population has not had much sympathy with its fellow-laborers of the cities, but within recent date indications are not wanting which go to show that the conservatism of the farmer will not hold him in line in the future as it has done in the past. The perpetuity and continued progress of this republic demand that what are termed the common people be contented and intelligent. Their contentment will depend largely upon their intelligence, and their intelligence will depend upon the facilities afforded them for acquiring an education. Happiness, of course, does not always depend upon knowledge, but the artisan must have an intelligent appreciation of his work, or he will not enjoy it.

The industrial classes are living under conditions very different from those under which their forefathers lived. The discoveries in science, and the rapid development of machinery and other labor-saving devices, make the labor of the ordinary workman much more complicated and difficult than was the work of his father on the same farm or in the same shop. The position of the man who can simply work with his hands is steadily growing worse in this country. In the cities his associates in labor are usually foreigners of the lowest class. But for the man of intelligence, who is able to put brains into his work, there were never brighter prospects than at the present time. The world is moving on very rapidly, and the industrial classes must keep pace with this progress. If they do not, in the course of a few decades they will occupy the same position relatively as that now occupied by the peasants and other industrial classes of Europe.

I know of no other means by which they can keep abreast of the times and maintain the high position of influence and honor which has always been accorded them than by more and better education. In this country, including those who attend secondary schools, the average school life of the child is but a small fraction over four years. The children belonging to our working classes receive, on the average, but a little over three years of school training. This must mean that about 75 per cent. of these children never get beyond the third reader; 50 per cent. of them, perhaps, never reach it. But one child in eight, including all classes, attends school after the age of fourteen; one in thirty-one after the age of eighteen; and but five of each one thousand enter college.

The great problem to be solved is how to keep the great body of children in school for a longer period. Fine school buildings, elaborate courses of study, psychological laboratories, child-study clubs, and great educational conventions will not save the children who are in the streets and in the shops. Higher education has many friends, and our secondary schools have had a wonderful development within the last quarter of a century. They are both in good hands, and are not likely to suffer in the future. But the nation is interested particularly in this great body of children who receive so little and who in a few years will be carrying all the responsibilities of self-government. Are our schools, as at present organized and conducted, doing all that is possible for them to do for the children belonging to the industrial classes?

Our public-school system, formed at a time when an education was scarcely thought necessary for the man who toiled for a living, has constantly led young people away from industrial pursuits. It is organized for the special advantage of the few who expect to enter a higher institution of learning, and perhaps later on one of the learned professions. It makes no pretense to meet the special demands of the industrial classes. The object is not to train students from the ordinary walks of life for the vocation to which they naturally belong, but it rather seeks to stimulate them to break away from present environments and seek a calling free from manual labor. This is shown in many ways, but very emphatically by the very few high-school graduates who return to industrial pursuits. Their school training seems to have unfitted them for work with their hands. Most of them are led to believe that there is really some easier way of getting a living than to work for it, and their manner often indicates that they believe the chief object of an education is to enable the recipient to obtain a living without manual labor. They have forced themselves into the professions, until all the learned callings are overcrowded. They crowd every village and city, willing to work for little more than enough to pay board, provided the work is such that they can wear clean clothes and have a good time. Young men leave good farms and shops, where success and happiness are assured, to work their way into a profession or business career, where success only comes, if it comes at all, after many years of anxious toil and waiting. It never occurs to this class of young men that it would be possible for an educated man to remain on the farm or at the bench. They are taught to regard such a life, from an educational standard, as a failure. Education to many of them means fine clothes, clean linen, and soft hands.

From the industrial classes come many bright minds, but, if they seek an education, they are at once alienated from the classes to which they belong; and, instead of being an uplifting force and a benefit to their respective classes, they are educated for another calling, and, while the profession or calling which they enter is benefited, the industrial class loses. No fault can be found with the young man who strives to reach a higher plane of living and a more noble and influential sphere in life than the one in which he was born. We are proud that in this country such opportunities have been offered the ambitious young man and woman; but, while this is true, it should not be a function of public education to lead young people away from the vocations to which they naturally belong. It should rather endeavor to make them intelligent, skillful, and happy in these occupations.

While our public-school system has developed rapidly, it has not adapted itself to the industrial changes which have taken place in this country within the last half century. The system is admirable for pupils who can spend from ten to twelve years in school, and who do not expect to follow one of the industrial pursuits; but for the great majority of children, who will remain in school for a short time and who will then be compelled to toil for a living, it could certainly be made much more helpful. Should not pupils in school, if possible, be given instruction which will fit them for taking up the work of life—something which will be of practical value to them? If practical subjects were introduced into the courses of study, two results would follow: first, pupils would be induced to remain in school longer, and, second, the knowledge and training given would better prepare the student for his future calling. Most pupils, when they begin to plan for the future, drop out of school, unless they can find something in their school work which will be of use to them in after-life. The argument that the study of Latin is a splendid training for the mind does not usually have much influence with the thirteen-year-old boy or girl. The great majority of children drop out of school on the slightest pretext. Very few are compelled to drop out from sheer necessity. It is safe to say that in nine cases out of every ten the cause is a lack of interest, both on the part of the pupil and on the part of the parent. It is predicted that, instead of only one out of every eight attending school after the age of fourteen, at least six out of every eight would remain after reaching this age, if they could find in their school work something which they and their parents could feel would be of special help to them after leaving school. This statement is substantiated by the history of those schools having a manual-training department. The son of the mechanic does not drop out of school when a mere youth, if he is given, in connection with his other studies, mechanical drawing, shop work, and such a knowledge of machinery and mechanics as he will need in the occupation which he intends to follow. Both he and his parents, tho perhaps ignorant, can see how this will help him in earning a living. While learning these practical things, he is at the same time drinking in knowledge from his books. Two or three years of systematic school work will change the ignorant, uncouth boy into a pretty fair type of citizen, and if he could take a high-school course, designed primarily to fit him for one of the mechanical pursuits, what a power he would be among his fellow-workmen, and what a useful man he would be to himself and to his employer!

The farmer boy would remain in school much longer if, in connection with his other studies, he were given instruction in those subjects which would aid him in his work on the farm. A simple treatise on the different breeds of live stock would interest him at once. There are many other subjects relating to rural life which would be of equal interest to him. Some of the Prussian schools have connected therewith gardens, in which the pupils are taught elementary botany and horticulture. If in his high-school course he could be given soil physics, agricultural chemistry, meteorology, entomology, and other subjects which would aid him as a farmer, he would return to the farm a cultured, educated husbandman. If such courses of study were offered in our high schools, many more would take advantage of them. Parents who now discourage their children from taking a high-school course, for fear they will become dissatisfied and leave the farm, or the occupation in which the father is engaged, would embrace the opportunity to prepare them to follow intelligently their chosen calling.

What is true of young men is also true of young women. Their education should, in some measure at least, fit them for the work which they will follow in life. No one, perhaps, questions what the natural and true function of woman is. She is the queen of the home. Why should not her education, above all other things, fit her for taking charge of a home? If instruction in cooking and sewing were given in our elementary and grammar grades, girls would remain in school longer, and, while receiving this useful instruction, they would at the same time be acquiring an education along literary and scientific lines.

With both boys and girls this industrial work should begin as soon as possible in their school course; not later than at the age of eleven or twelve. If placed in the high school, it reaches but 5 per cent. of the pupils, and these 5 per cent. are the very ones who can afford best of all to get along without it. The educational value of this practical work is conceded by all, or nearly all, progressive educators. But the practical value of such work has not, it seems, been fully appreciated. The public schools are charged with the responsibility of preparing pupils to live successful, happy lives, and to become intelligent, patriotic citizens. A man who cannot earn a comfortable living will not make a good citizen, even if he has the ability to read Cicero's orations and scan Virgil. Without sacrificing the intellectual, it comes within the province of public-school education to give such a training to pupils as will enable them to approach the duties of life on the practical side.

But the best results of all following the adoption of manual-training and other practice work is the tendency of pupils to remain in school longer.

The design of this paper is to show that, while the industrial classes are the backbone of this nation, the public-school system does not recognize this fact, and does not give to them the encouragement and help that it should. Instead of giving instruction along industrial lines, it leads pupils away from these pursuits. A plea is made for industrial and practical work in all grades, to the end chiefly that pupils may be induced to remain in school longer, and in the end be better fitted to live useful lives after their school days are over.

DISCUSSION

SUPERINTENDENT E. MACKEY, Reading, Pa.—When the subject of this paper was announced, I anticipated a discussion of methods of educating working men and working women, such as university extension, college settlements, evening schools, and lectures. To this field there is a call for missionaries. Every teacher can bring a gospel of good tidings to some of the slaves of toil. If it were mine to spend my days in manufacturing the two-hundredth part of a watch or to "stitch, stitch in poverty, hunger, and dirt," I would hail with threefold blessings that teacher that would lead me to feel that "my mind to me a kingdom is," or lead me to rejoice in the "wages of going on and not to die."

The paper, however, is a plea for the introduction of manual training and technical studies as a means to keep the children of the industrial classes longer in school. We may take it for granted that the end sought, a longer period in school, is desirable, both for the sake of the child and of society.

The paper claims that "the educational system of today does not meet with the needs of the industrial classes." What are the special needs of the industrial classes? Are they more in need of a technical or of a liberal education? Shall we carry coals or bread to Newcastle? We cannot claim that our educational system meets all the needs of any class. It is not a perfect system. It is not the mission of the public school to meet all the educational needs of any class. But is there not evidence that the desires of the industrial classes largely dominate, not only the courses of study, but the spirit of the instruction in many of our schools? What an array of "brick" questions, "paper-hanging" questions, and the like, in many arithmetics! True, the bankers and merchants seem to have the advantage of the laboring classes there. But in the readers, what a great quantity of "information" lessons! Surely the trades have been considered there. History and geography give special prominence to industrial achievements. Manual training is very commonly advocated and supported for purely industrial ends. Almost every course of study shows detailed efforts to appeal to the desires of the industrial classes. There is a constant clamor for the "practical;" a generally prevalent election of studies with reference to a prospective trade or profession; there are teachers everywhere impressively telling how it "pays" to study this branch or the other. "Money is the principal thing, therefore get money; yea, with all thou hast gotten, get money," seems to be the popular version of the old proverb. In fact, there is no slight provocation for Sam Jones' caustic remark that "the trail of the trade-mark is over us all."

I believe that the public school should do much to prepare a young man or a young woman to earn a living, should call forth and intensify the spirit of industry and self-dependence in every pupil; but I have grave misgivings when wage-earning is made the goal of instruction in the common schools, when a course of study is so constituted or modified that its graduates can the more quickly find a job or get into the rut of some particular trade or profession. I know that Dr. Snyder puts his plea for technical studies and industrial training upon a higher plane than that I have just now presented. His plan is attractive and his line of argument strong. The most of what he says and recommends I can indorse. And yet, is it after all advisable to require the common schools to give to the son of the mechanic, or even to the prospective mechanic, a course in "mechanical drawing," "shop work," and "mechanics," and the country boy a course in stock breeding, "horticulture," "soil physics," "meteorology," "entomology," and "agricultural chemistry," and, hence, to each of the other occupations of men a common-school curriculum suited to its peculiar demands? There are few teachers capable of giving the varied instruction such a plan would require. To do such work effectively, it would be necessary to begin specialization at a far earlier period than is now common.

Would not this plan eventually involve separate special schools for each class of pupils, according to the occupation of the parent, or, if determined, the prospective occupation of the child? It is certainly impracticable and unwise to send all the country boys at the age of ten or eleven years to a special school, with special agricultural courses, and all the mechanics' sons at an equally early age to special school shops, and so on thruout the long list of industries.

Is it advisable to keep all the farmers' sons on the farm, or all the merchants' boys at the counter? What of the spontaneity of growth, what of the versatility of childhood, what of the emancipation of the spirit? Would not "the shades of the prison house" still earlier shut in the growing boy? Is it the mission of the common schools to perpetuate caste?

Is it the fault of the subject-matter of our elementary-school courses of study, or even of the high-school courses, that some of its graduates leave the occupation of their fathers?

Do our schools necessarily unfit pupils "for work with their hands"? There are profound economic reasons that have had more to do in recent years with proclaiming farm life a failure than the public schools have had.

It seems to me that Dr. Snyder's plan leads in the wrong direction; that it lays too much stress upon the lower motives; that it really narrows education, while apparently broadening the course of study; and that it is hostile to that education that makes for the best development and the complete emancipation of the individual and of the race. The defects are apparent, but the remedy proposed does not strike at the source of the disease. It deals with the symptoms rather than with the causes.

I believe in nature study, and that not for the farmers' sons alone, but for every pupil, and not in that study of nature that sees only a truck farm, but in that which means a true communion "with all her visible forms." I believe in experimental physics in the elementary schools, but not for the purpose of making juvenile electricians or plumbers. I believe in manual training in the elementary schools, not for the industrial classes alone, but for every boy and for every girl. I need not rehearse the benefit nor the purpose of manual training to this audience, nor do I need to discuss for you the radical difference in method and aim between manual training and industrial training. It is certainly evident that manual training, in the best educational sense of the term, is not the industrial education that the gentleman prescribes for and advocates in behalf of the industrial classes. Industrial training, to appeal to the desires of the industrial classes which are leaving the schools and entering the factories and shops, must be in the order of trade schools; it must take the place of an apprenticeship, and enhance the immediate chances for remunerative employment. The manual-training school is not a trade school. The aim of the one is culture, of the other, business; the one educates the whole mental and moral nature of man, the other trains the spinal cord and efferent nerves. The one is altruistic, the other egoistic; the one social and co-operative, the other selfish and competitive.

I believe in industrial education in special schools for the industrial arts, but not as part of the *elementary*-school system. The outlook for ultimate supremacy of this nation in the industrial world is just now especially promising. Already have the products of our industries surpassed all, even the native, competitors in many of the foreign markets, notwithstanding the higher price paid to American labor. A recent editorial in the London *Journal of Education* says: "It seems an undoubted fact that in many quarters English manufactures are being driven out of the market; and the opinion is very widespread that this state of affairs is due very largely to the want of any general organized instruction—we do not say education—after the standards have been passed." The phenomenal advance of Germany in every line of manufacturing is clearly due to the establishment of numerous institutions for technical and industrial pursuits. The success of French art industry is attributed not only to the talent of French workmen, but especially to their "very thorough and appropriate schooling in designing and manual labor." The success of our industries, I believe, has been commonly and rightfully attributed to the superior intelligence of American workmen.

The horizon of the nation is being widened by recent events, its spirit wonderfully quickened, and to meet new conditions, to meet the vastly larger opportunities that await us in the industrial lines, and to keep at least equal pace with the industrial advance of other nations, will demand a still more advanced training and equipment of American workmen in the highest type of schools for the industrial arts.

To recapitulate this discussion roughly, I may say that:

1. As far as the paper recommends that the public elementary schools be required to prepare a boy for his father's trade, or to provide special industrial courses of study for the industrial classes, I must dissent. I believe that there should be only one course of study in an elementary school. It should be adapted to local conditions. It should lead, however, not to some particular trade or profession, but to the most complete and har-

monious development of the pupil's best gifts. It should give the rudiments common to all trades, but the special training of none.

2. I cannot indorse the statement that the needs of the industrial classes are not provided for in all good modern courses of study in the common schools as well as the needs of any other class. The industrial classes need the education of the common English branches, and they need culture as much as any class does. In my opinion, what is most needed by pupils of every class is that instruction which will make tenderness and truth forever regnant in their souls. In revealing the truth that makes men free, and in arousing the love that makes all men brothers, good literature can do more than the best treatise on agriculture or mechanics, and one noble song, thoroly appreciated, more than a specimen of soil well analyzed.

3. I cannot assent to a proposition to prescribe a special course of study in elementary schools to meet the especial needs of each class of laborers. I believe in individualism in instruction, but the most imperative needs of the individual pupil in the elementary school should be met by the teacher by special method in teaching, and by choice of appropriate illustrations of general principles, not by elective courses of study.

4. I believe that to prescribe one course of study for the country boy, another for the mechanic's son, in the elementary or in the high school, as suggested by the paper, is neither wise nor, under present conditions, practicable. I believe, however, that, in view of the new national era upon which we are entering, with its possible incentives to commerce and manufactures, there is a most urgent call for the establishment of a complete system of industrial and technical schools. These schools should be elementary and advanced, corresponding in grade, and somewhat in relative function, to elementary school, high school, college, and university, with special academies for original investigations and inventions in this line of industrial arts. These schools might have day and evening sessions. They should fit the pupil for efficient service in the trade or art of his choice, and be a potent factor in advancing the standard of skilled labor and the character of its products. Their curricula should be adjusted to the course of study of elementary public schools, but not a substitute for it, nor, in an exact sense, a continuation of it.

5. However important it is to keep children from quitting school so young in years and so low in grade, I cannot indorse the remedy proposed in the paper, nor approve of its appeal to what seems to me the wrong motive for education. I believe that, to increase the length of the school life of the children of the laboring classes, the minds of the parents must be liberalized and their consciences quickened; there must be more work and better wages; economic conditions must be changed to favor adult labor rather than child labor, intelligent rather than ignorant laborers; the pulpit and the press must continue and increase their influence upon the education of the masses, and the schools must more effectively win and hold the individual pupils for the highest and best things. We have reason to believe that many other factors of civilization are also working for this end.

DOMESTIC SCIENCE AS A SYNTHETIC STUDY FOR GIRLS

BY MRS. ELLEN H. RICHARDS, INSTITUTE OF TECHNOLOGY, BOSTON, MASS.

If "the youth must always begin again at the beginning, and as an individual make his way through the epochs of the world's civilization,"[1] and if "the aim of education is to have the pupil reach the highest intellectual and moral standpoint of the race in the briefest time and with the greatest economy of effort,"[1] it is evident that the recapitulation of the experimental knowledge which the race has slowly accumulated thru one or two hundred centuries must be condensed into ten or twenty years of the pupil's existence—a thousand years of race development into one year of the child's life. It, therefore, behooves all who have to do with the education of children to search for the fundamental ideas of each race epoch, those which lifted the race highest, and not to waste time on mere survivals. Certain short-cuts must be found which will lessen the time and effort required.

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[1] Goethe.

Morgan gives as the fundamental ideas which have induced invention and discovery, and resulted in civilization: (1) subsistence, (2) government, (3) language, (4) the family, (5) religion, (6) house life and architecture, (7) property.

For the purposes of this argument, the epochs may be provisionally stated as animal, savage, earlier and later barbarian, earlier and later civilized.

According to Romanes, "the highest development of the animal mode of thought is reached by the child in the first part of its second year." The long period of savagery is shortened for the modern child into two or three years by the circumstances of family life. He does not need to search for subsistence, or to provide shelter, or to invent a language. His environment offers this, and he needs only to correlate himself with it to discover himself as an individual.

The early barbarian age comes to the average child at about three to five years. Characteristic of this epoch are picture writing, symbolic of dawning ideas of a religious character; the making of rude implements; the beginning of ownership. The later barbarian age may correspond to the age of five to eight years. The use of sharp tools, the ornamentation of clothes and of articles for ceremonial observance, the excessive use of color, the acquisition of property, the beginnings of government and community life, belong to this period.

The epoch of early civilization includes a control of the newly discovered forces of nature, namely science, and, as a result, the beginning of arts and manufactures, the extension of industrial processes, the consequent evolution of house life and architecture. It is this epoch which has been neglected in most schemes of education, and for which I wish to plead as an educational force.

To make the point clear, let us review the ruling impulses of the epochs: The savage seeks food and shelter, such as nature offers him. His whole life is bound up in the preservation of the race. The barbarian feels the thrill of conquest, is fired by ambition for the future power of his family, and he begins to accumulate. Civilization, being more or less permanent, looks to perpetuate its victories in stone and in song; to please itself with creating, from the bountiful gifts of nature, things for its own pleasure which are not necessary for daily life as mere existence. It creates wants and then supplies them. A new breath of life has been breathed into the race. "Free ideas," the "creative instinct"—call it what you will—it expresses itself in the effort to make something, a constant activity, instead of basking in the sun when hunger is satisfied. There is now a hunger of the soul which is never satisfied. Underneath child-study is the study of the race stages which influence the child's mental development. What do our schools offer to our children to foster their mental growth by utilizing this race impulse? What do we not do to kill this yearning? We put young children on hard seats, in cramped positions—barbarians, nay savages, that we are—force into their hands a dead book, which must not be crumpled or torn, and exclaim, "Study! study! recite!" and this when the race instinct demands things, objects to be handled, to be put together, built up into something which pleases and gratifies. The pulling into pieces of flowers and animals has no place in the curriculum at this age, and the length of time required for seeds to grow and eggs to hatch precludes much of this work as an educational factor in the lives of those to whom an hour is as long to wait for results as is a year to the adult. Constructive is the keynote of the education of the child between the ages of eight and fourteen years, synthesis in distinction from analysis.

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[1] Vincent.

Is it safe to ignore this fundamental phase of race development? If we have neglected it at its proper time, is it safe to count upon the survival of the creative force after the pupil has passed thru the fiery ordeal of study from books and examination for promotion? There is an economic conservatism in all nature's apparent lavishness, and there are fundamental economic principles under all advance in science, in art, in æsthetic ideals. What is the "economic function" of woman in this race progress? According to Edward Devine, the home, made possible by the mother's love for and care of the family, in which the higher of economic functions, that of determining how wealth shall be used in order to secure the highest enjoyment, is the center of interest in any study of present social and economic progress.

Prosperity depends quite as much upon the choice of the various commodities and their combination, in order to secure the greatest pleasure and satisfaction, as upon their production. In fact, production is limited by choice; manufacture ceases when demand ceases; hence, in order to influence production, choice must be wisely directed. Production has been stimulated by combination and competition; many thoughts of many minds have gone into the perfection of a machine, into the design of a beautiful building. Whatever may be said from the artistic standpoint, from the economic, collective industry alone has made possible the rapid advance of the nineteenth century.

But the home is still an individualistic industry, protected from competition, hedged about by tradition, and nearly smothered by the dust from the wheels of progress now far ahead ; it seems to be no longer the center of enjoyment for the products of wealth, because the woman has lost her grip, and the cable travels only the faster without her ; because, in her struggle to become an active producer, she has lost sight of the science of consumption — that destruction of wealth which gives the highest satisfaction. It is her privilege to stand on a higher level and say what shall be produced, and in what combination materials shall be used in order to give that greatest satisfaction which is the end of all effort. It is for her, with dainty touch and artistic insight, to transform the crude products of the factory and the workshop into things of joy. It is for her to make her labor more in demand by that refinement of taste which, when educated rightly, she is best fitted to give.

That the home is not fulfilling this function is evident from the decadence of true home life and the loss of industrial skill. One of the severest arraignments of even the college women of today, who are aiming at higher professional work, is that, when compared with men in their classes, they cannot think, judge, and decide — that is, they cannot use to advantage the knowledge they have confessedly gained. Just as in domestic affairs women have not yet availed themselves of the opportunities which the scientific progress of the time has placed in their hands. And this in the face of the fact that in early civilization the women were the manufacturers, and that nearly all industries were in their hands. Why has everything slipped from them ? Why is it that, altho this last hundred years has seen the greatest advance ever known in mechanical device, has seen the greatest feats of constructive invention, women have allowed all the arts relating to house and home to pass from their hands into those of the hotel clerk and the janitor of the apartment house ? Why do they buy fabrics, furniture, and utensils on the recommendation of the salesman at the bargain counter, and not because of their intrinsic value ? I believe it is the fault of the school education, which has taken no account of the value of the constructive arts as a stimulus to original thought; which has neglected to cultivate that sense of power over things and over environment which the study of arithmetic does not seem to give to girls.

The time to encourage this original thought is in the early years of childhood, before any question of copying anyone else can arrive. From the earliest years the child's thought should be expressed in its own way, and what it will learn naturally should not form the major part of its tasks, but rather that which must be placed systematically before it, in order that it may miss none of the stimulating incentives which have proved such factors in the past. It has been said that responsibility is an inspiration, not a burden, in the evolution of the race; our schools have taken the responsibility, and the pupils have lost the inspiration.

The child should have his or her mind quickened, as the race was stimulated, by the pleasure of producing results by his or her own labor, and these results should be judged by his or her own standards, and not by those of the adult. That is, instead of requiring fine stitches in sewing, the effect of color and form and ideal should be reached in coarser material and with more rapid action. A large doll might be most effectively dressed in barbarian fashion in the time taken by the child in painfully toiling over the fine stitches of a sample patch. Neither savage nor barbarian woman felled her seams. The fundamental ideas of early civilization were invention and conquest. The fact that all values are created by human labor, that the hand-made article owes its higher price to the fact that human brain has guided human hand in its production, should be impressed upon the child's mind.

Since "abundant food hastens maturity, namely, abbreviates the recapitulation process," advantage may be gained by placing the child in environment rich in suggestion, by furnishing the materials for discovery and invention, so that he will find himself possessor of a rich and varied experience, not by mere information, but by personal acquisition.

The growth of the body follows an even line of gradual increase from five to eleven, and at about eleven and a half makes a decided upward rise of rapid increase; and, since all energy is one, it follows that in the periods when less is required for the body more may be given to the mind. Hence the years from five to eleven are the school years in the sense that the child may be abundantly fed with the facts accumulated by the race, in order that he may have the richer store to draw upon in the next period, from eleven to fourteen, when the stirring forces within need outlets for their race instincts, in order that the fancies may not be turned within and so become mere morbid phantoms, instead of realized visions. The imagination should be cultivated thru the use of materials in building up real forms. Creative industry is essential to a lasting growth of true imagination, not that sentimental revery which too often passes under that name.

By the age of eleven, girls are ready to consider the care-taking which is to be their work in the world. They love responsibility and are inspired by it. They enjoy work, even what the fine lady calls menial work. They are still in the race epoch when work was a pleasure because of the results obtained; there is then a delight in the mere doing, when the end is not far off, and it is nothing short of a wicked waste of nature's forces to deprive girls of this unreplaceable stimulus to mental effort.

Give to the girls, then, an opportunity to develop normally, to care for things, to handle things, to build up, according to their own devices out of materials furnished, certain creations of their own fancy. Expression of ideas is not confined to painting pictures. A bonnet or a dress can and should express the individual's thought.

If brain development is a consequence of bodily activity, then the child should be encouraged to use his bodily powers. Because the newsboy by his varied activity has learned much of the evil of the world, along with its wisdom, shall we keep back our children from competing with him in sharpness of wit and keenness of intellect? If children have no homes, or if children are taken from their homes, where they should learn all arts of daily life under the best conditions, the foster home, i. e., the school, must make up to them for their loss, and it can, if it will, do even better and with more intelligence in certain directions, because of a broader outlook over race conditions.

Once again let us ask: What does the young savage need in order to make him a civilized man? He needs, in addition to food for the animal, clothes and shelter. He needs to keep these and himself clean. He needs pleasant surroundings — color, form, flowers, music — to express his ideas and yearnings. All these stimulate him to imaginative thoughts looking forward to the future. He needs a mastery of the forces of nature, in order to minister to his wants and to give him that sense of power, that oneness with the creative faculty, which is man's distinguishing characteristic. There must be awakened early this sense of power, of mastery over environment, while yet no fear of consequences is known, and before cold calculation destroys spontaneity.

What can give this sense of power except the early knowledge of, and control over, matter? The child who makes a boat or a steam engine, who puts up a telephone, has a greater sense of power than one who only does what he is told to do, because he is told to do it. Book learning and obedient manners are all right and suitable, but they are not all, and they do not, in the child, advance civilization, because they are not the expression of the child himself, but are added from without.

I envy the child who rides a bicycle without learning; he just jumps on and rides. We should give young children a chance to do things. They do not require much teaching. We teach too much. The child is far quicker than the adult to grasp what is suited to him. We present to him something which he cannot grasp, the large end, and he wisely refuses it. We call him stubborn, when he is only wise. We forget that the abstract is arrived at after much experience with the concrete. We must not deprive the young intelligence of the satisfaction of seeing the work which is the joint product of his hand and brain.

A most suggestive series of experiments on animal intelligence has recently been made, which indicates that the animal learns by doing, by his own discovery of how to do, and that this individual discovery makes a brain groove which is persistent and permits the action to be repeated without effort; also that no amount of teaching can replace this sense of individual discovery. Pascal, wiser than his time, says: "We are more easily persuaded by the reasons we ourselves discover than by those which have been suggested to us by others."

Here, then, is a lesson as to the manner of taking the child thru the race stages. He must be allowed to make these useful grooves early, so that his later conscious effort may be available for higher endeavors. Apparent failures may be the most productive experiments.

If the habit of care-taking, of responsibility for the welfare of the household, of the daily doings of the thousand and one things which insure the well-being of the family, is essential to women; if the race is not only to be preserved, but advanced, then these grooves of habit should be made early, while the child, girl as well as boy, is one bundle of activities, only eager to be used, which may just as easily fall into the lines of constructive as of destructive application.

It is contrary to all laws of race development to allow the child to pull to pieces without putting together again. The kindergarten teaches wisely in this, but later, unfortunately, botany and zoölogy are often chiefly taught by dissection, involving the destruction of the life which has built up the delicate structure. The productive ideal in education should keep the constructive forces to the front, until sufficient progress has been made to understand the necessity for some analytical work before a further constructive action can follow. Not until the age is reached when a clear comprehension is acquired of abstraction and of a connected line between the concrete and the abstract idea, when the cycle so evident in all nature can be understood in its entirety, should this analytic habit be formed.

It is claimed by many that women cannot observe, are not good scientific experimenters: that as medical students, for instance, they cannot use either eyes or hands as they should; in short, that they are merely imitative, not inventive, and, therefore, that they are in a less advanced state of civilization than men. I believe that this is a true indictment, and that it is true in the college laboratories and university class-rooms because it is true in the daily life of the household, and that this household life is the place to begin a reform, if the higher intellectual life of women is to be influenced. The lack of sympathy with the great industrial progress of the century is apparent in every house, the lack of original thought is apparent in every woman's dress. Blind bondage to custom is shown by the views women take of all new and larger questions. I do not believe this is because of any inherent inability to advance with the race, but is solely a matter of education and of habit—"that purgatory in which we suffer for our past sins."

It is, perhaps, not too much to say that women are—today—the stumbling-blocks in the way of higher industrial, social, and ethical progress, and that they remain so because the leaders of educational thought neglect the path by which advance would be rapid, and refuse to see the value of a study of the history of industry as a synthetic element now lacking in the education of girls.

DISCUSSION

Perla G. Bowman, Ohio State University.— The proper education for girls and young women has long been a mooted question, and, while various half-hearted attempts have been made to solve the problem, there has been little apparent success.

Today, however, those of us who are actively engaged in school work realize that a new element has entered into their training, since in many institutions some small amount of time is being devoted to what may properly be called homely subjects. Into the public schools have crept sewing and cooking classes; young women's Christian associations have prepared courses for working girls; women's clubs are discussing home topics; and the highest educational institutions, as Chicago, Leland Stanford, our state universities, Vassar, Smith, and many others, have introduced lecture or laboratory work planned particularly to train girls for the home.

The opening of college doors to young women made it possible for them to broaden and deepen intellectually, and to take an unchallenged place in the world; but, after a trial of almost a quarter of a century, there still seems something lacking.

Following hard upon the recent struggle by English women for equal rights and privileges with men in their universities, Oscar Browning, professor of history in Cambridge, published in the *Forum* the following: "The advantages of joint education as they concern women and men are of two kinds. We have shown with regard to the first that what is an ideal education for women has never been worked out, and the proposition that it should be identical with man's is a mere assumption. A perfect woman is distinct in type from a perfect man. It will, I suppose, be admitted that women are constitutionally different from men; that they have peculiar gifts, and that the moral and intellectual powers which they have in common are, for the most part, combined in them in different proportions and tend to form different characters."

It will also be admitted that education is designed to train the whole person and not any one part, and to give as natural, complete, and harmonious expression as possible to the sum of the student's powers. If, then, the Cambridge courses have been carefully designed to meet the special powers and needs of men, they must so far fail to meet the special powers and needs of women. If a woman is forced to submit to conditions which have been laid down, not only without consideration of her requirements, but in view of other requirements, she must suffer. I gratefully recognize the gain which women have found in the Cambridge courses, but I believe that it has been secured at high cost and not without loss.

We who have watched young women step from the college into the home are dimly conscious that in the step is often an element of tragedy, and that the ignorance of new conditions frequently gives rise to complications, the memory of which years will hardly obliterate. In this country the appeal, not for less, but for a broader education, has come from women themselves; and mothers, after trying experiences, beg for their daughters a more absolute knowledge of wise living than that which they in their training received. It is this demand which has forced practical home training into our educational institutions; it is the groping after the lacking element of power in women which is now making itself felt, and which, undoubtedly, will in a few years have made permanent a science and art of its own.

At present the problem is working itself out in many ways, and in many places, and, with increasing knowledge of the needs and remedies, the study of domestic science must broaden and strengthen. The courses in home training now being introduced into the public schools will in future years exert a powerful influence over our land, and people will come to realize that they furnish not simply amusement and transitory training for children, but that they are among the greatest of the sociological factors for good.

Properly directed, the laboratory periods in the public schools should be not only periods of relaxation, but should contribute to a store of the most valuable information. Among the poorer children are numbers who never reach the college nor, indeed, the high school; who are loaded up with household duties before they are twelve years old; who care for younger brothers and sisters, cook for them, darn for them, watch over them as their mothers might were they free from the wash tub, the shop, or the factory; who, before they are fourteen, are compelled to leave school, that they may assume even more of the burdens of life. If these children are not provided for before this time, the state has no hold upon them, and in a few years they are the mothers of another neglected generation. Could they be interested in a better living during the formative period, what a different influence might go forth into the world, for we each and all must recognize the power of environment. The poorest waifs love pretty, dainty things. They are sensitive to their clothes and surroundings, and the interest which may be awakened in the sewing class in personal appearance and hygiene is greatly undervalued.

But domestic science is not designed for the poor alone. It is the consensus of opinion, after much observation, that mothers have little opportunity or time to train daughters and sons for home duties; and, moreover, children have little inclination to be so trained. In the schoolroom there is the element of novelty, the delight of change from purely literary to laboratory work, the incentive of competition, and the anticipation of repeating their efforts in the home. There is aroused in the child a more healthful sentiment concerning home work, and class contact develops the elements of helpfulness and humanity. Those who will be served are brought more closely into contact with those who will serve, and many of the difficulties arising in later years concerning the relations existing between mistress and maid will be solved for these children. They shall have worked side by side, will recognize the same hard places, and shall have learned that by being faithful to the most homely duty they are helping to make life happier and more wholesome to all men.

The intrinsic value of education to any individual depends, not upon the acquirement of an infinite number of facts, but upon the development in that individual of power to make use of those facts.

The aim of domestic science should be to point out the connecting link between theoretical knowledge, already so well perfected in our schools, and practical home life as it must be met.

The difficulty with college education for women lies in the fact, as recognized by Professor Browning, that the curricula were originally and fundamentally planned for men, and, when women have chosen to enter university walls, it has been to select from what was already provided. The result has been trained and broadened intellects, but intellects trained almost entirely from a man's point of view. The woman graduate finds herself possessed of a general culture, with a possible foundation for the professional world, but with no special preparation for the position in which she most often places herself. Nevertheless, the possibility of university training was the most important step in her emancipation, the step which enabled her to stand as a companion and helpmeet for man, the step which carried her forever beyond her old position and gave her power to direct her own development.

Education, if it means anything, means an all-round development, the perfection of body, mind, and soul. The proper care of humanity is beneath the notice of no one A strong and attractive body and a charming personality are among the greatest of gifts, and can be retained only by a knowledge of the laws of health and obedience to them. How largely the possibilities of mind and soul depend upon physical conditions is not yet clearly recognized, but, if domestic science can train young women to more healthful, more economic, broader, and more appreciative living, it certainly has its place, and a high place, among the sciences of the day.

It is not possible to isolate this work from regular studies. To be successful it must go hand in hand with the sciences, languages, and arts. What could be more reasonable than that the study of art should lead one, not only to the appreciation of master paintings, sculpture, carving, architecture, but also to the masterful creation of beautiful homes, gowns, and other material surroundings? There is no effort on the part of domestic science to teach trades; its whole aim is to make more capable and more charming home women.

It has been said that one of the difficulties of the present college education is the helpless attitude in which graduates face the world. They are often excellent students, under the inspiration of some fine intellect, but, without this guiding influence, are uncertain and insecure. There has been a failure to make the student original and independent, to mark clearly the bearing of study upon living. Surely there can be no education too broad or too comprehensive for the preparation for home life; yet the connecting link between the school and the family seems to have been lost, or, better perhaps, is just being forged. It is this link that domestic science seeks to put in place. It is believed that such a training for young women will not only make all life fuller and more useful, but will help to bridge the time between college and the serious assumption of responsibility. The return of a young woman from college ought not to be, as is now so often the case, the entrance into a strange realm; but the new environment should appeal to her at once, urging her to activity because she is already interested, not alone in political economy, but in domestic science — not alone in the history of the past, but in making the home history of the present and future. Her college life should have placed firm stepping-stones for future work, making it possible that she advance along a path already tried. There is, undoubtedly, much wrong in an education which assiduously guides and directs a girl thru years, but which graduates her into a life for which there has been no definite preparation.

Our brightest, most capable, most brainy and hearty women are those who are educated both in books and in practical things; who have intellect to perceive what is good, and the technical skill to secure it. Domestic science claims more than that it can make deft fingers. It aims to cultivate memory by awakening interest; to build up scientific minds, minds which will reason and plan; to develop artistic instincts which will appreciate, beautify, and elevate; to care for and train the body, that it may respond to the will; to awaken a feeling for humanity which shall be far-reaching and ennobling. It may not accomplish all this at once, but questions have been raised which must be answered, a dissatisfaction is apparent which must be met, and out of these attempts some good shall come. When these first efforts have had time to bring forth results, it is hoped that it may mean much for the broadening of women's lives in the home, that it may prove an inspiration to earnest and higher study outside of college, not for the sake of degrees, or that one may boast of her text-book lore, but that she may understand life better, by so doing appreciate the living more thoroly, and be better able to bring beauty, health, and happiness to those about her.

One of the social problems of the times is the fact that wages are meager and positions scarce, because of the competition of young women with young men in the ordinary business avenues. For this the education of our girls is largely to blame. The college graduate may not take her broadened intellect and rare knowledge to a home without feeling that she is wasting her time. The high-school graduate has possibly much to keep her at home, but she is unaccustomed to it all, it is irksome, and, according to her training, to be ignored; so she drifts into teaching, or into the business college, ultimately to make a success or a failure, as the case may be, but nevertheless crowding by one more the ranks of wage-earners, living always at high tension, and in the weariness of a few business years knowing almost nothing of the charm of home life. If either young woman marries, her training is thoroly inadequate; but, when it becomes necessary to establish some sort of abode which may serve the purpose of a home, with consummate confidence she attempts to master in a few weeks what should have been the gradual and delightful acquirement of years, and heartache, discouragement, and waste follow in her wake.

Until some agency outside of the home takes the matter into consideration and treats it, not as a weak sentiment, but as a condition worthy of scientific economic study, there is little chance of a change for the better, or that the drift of young women will be other than toward the business world. The public schools, colleges, seminaries, and universities, if they fulfill their mission, must offer training adequate for the responsibilities of life, as most women ought to meet them and must meet them—a training which shall be broad, which shall supplement and not antagonize established principles, which shall send women to their work cultivated in soul, mind, and body, and prepared to make life brighter and better for all with whom they come in contact.

Women are realizing that a satisfactory life is not all in the home nor all in the world; that knowledge is valuable only in so far as it makes them more competent, more womanly, better prepared to aid humanity, whether it be in the family, the city, the state, or the country. If woman is to be so prepared, it means a knowledge of life and all that goes to make it worth having; it includes an appreciation of all that is beautiful and good, all that is homely but useful, all that is necessary and healthful. For this knowledge no course is complete which ignores the bearing of all sciences and arts upon the problems of living.

There is an unlimited amount of sentiment written and recognized concerning home life, which in the best form is to be cherished; but, when women fully awaken to their responsibility, they must admit that there is more than sentiment required to make an ideal family life. There are laws of health and harmony as inexorable as any other of the laws of nature.

Home, with all it implies, is equally sacred to men and to women, and of every rank of life. Why, then, should women deem its work ignoble and its study something which shall be met with a smile and a shrug? While woman must plan and furnish the home, be in it in some capacity of wife, mother, sister, or daughter; while to her look all its inmates for comfort, food, recreation, and nursing; while upon her depends so largely the wise management and expenditure of income, is it unreasonable that she should receive some special training for her duties?

Rather is there reason and justice that to the present efficient courses of study in our schools should be added some of the home sciences and arts.

The girl in the chrysalis state today is the woman tomorrow. If her mission in the world be truly fulfilled, she must be more than the beautiful butterfly, not less. To mind culture, charm of personality and soul, and the desire for noble living should be added power. She should not only wish to be useful, she should be able to be useful, and, when education has provided a perfect course, the demands of life shall no longer find her wanting; she will be prepared, and within herself shall be the ability to rise to any responsibility.

MANUAL TRAINING IN HORTICULTURE

BY PROFESSOR WILLIAM R. LAZENBY, COLUMBUS, O.

[ABSTRACT]

It is generally conceded that there are three quite distinct factors in any well-rounded system of education.

These are knowledge, training, and culture; or the development of the mental, physical, and moral forces, so that man shall be fitted for his most perfect work. In other words, to know something, to do something, and to be something comprises a large part of the duty of man.

The age demands a system of education which recognizes the truth that man is by nature a worker, a molder, and ruler of matter. It believes that daily physical, as well as intellectual, effort is one of the conditions of a healthful and happy existence.

There is too much teaching and too little training. Our present national crisis has demonstrated that the manual as well as mental training that is given by our military and naval schools is just what best fits our youth for eminence and renown as military or naval commanders. If this is true for the art of war, can it be any the less true for the peaceful arts and great industries of our times?

In order to maintain a full measure of bodily strength and intellectual vigor, at least four things are needful. These are: pure air, nutritious food, unbroken sleep, and muscular exercise. Horticulture supplies these, besides offering unequaled opportunities for nature study and the application of the principles of science. Horticulture offers signal advantages in the way of manual training. The small amount of land required for this purpose could be easily secured, and the necessary equipment in the way of tools, etc., would not be expensive.

For winter and to use during the inclement weather of other seasons, a glass structure, having the external form of an economical commercial greenhouse, should be necessary.

The work undertaken in these horticultural-training departments should embrace the various operations of propagating plants by seeds, cuttings, layers, budding, grafting, etc. Transplanting, pruning, and training, cultivation, drainage, irrigation, and similar operations could be performed on a small scale; the making of lawns and flower beds in miniature, the laying out of a model kitchen garden, and work of like character might form a part of the instruction and training.

The hammer and the saw should be supplemented by the hoe and the rake. The budding-knife and the pruning-shears, as well as the plane and chisel, should be used to educate the hand and eye.

We need a system of education which recognizes the fact that men and women were placed on this earth that they may work. That is certainly a defective, if not radically false, system of education which leaves its subject no better qualified for any useful calling, with no more strength to wrestle with adversity, with no more power to maintain a healthful, independent existence, than tho he were unlettered.

The great problem of educational reform is the proper blending of labor with study so as to develop skill of body as well as activity of mind.

It is only thru an education like this that the great masses of our people can ever attain the position and develop that self-respect which the genius of our age predicts and requires for them. And this education, for the most part, has yet its schools to modify and its teachers to train or discover.

DISCUSSION

GEORGE T. FAIRCHILD, Berea College, Berea, Ky.—I know of no reason other than general interest in the subject for which I, who know so little about horticulture and practically almost nothing of it, should be chosen to discuss this interesting paper. It would, indeed, be presumption in me to consent, did not Professor Lazenby himself stand as one who knows all about horticulture and practically almost everything of it. From the standpoint of supreme interest in this means of enlarged ideas for all youth, and especially for youth in rural neighborhoods, I am willing to contribute a word to the subject before us.

I believe in education thru the handling of things about us, and horticulture affords the surest way of arousing and maintaining the interest in things so essential to development of power over them. Let me epitomize the essential aims of education, that we may see how Professor Lazenby's ideas fit into any true scheme.

All can agree, I believe, that the universal aim of education is to give, first, control over things about us, i. e., over external nature; second, control by influence over fellowmen; and, third, control over self in all relations. These secured, whatever the road by which we are led to them, we have the largest life, the truest culture, the most thoro education. For control of things about us there is no possible method outside of handling those very things. We all recognize the truth of Lord Bacon's statement: "All that man can do is to move natural objects to and from each other; nature working within accomplishes the rest." Any control of external nature depends on moving the right things at the right time to the right place, and for this we need to have direct contact with nature itself. As Tennyson says, we must learn to "rule by obeying Nature's powers." There is no control without strictest obedience to the facts as given by Nature herself in our efforts to handle nature. This is the secret of success in all manual training; it reveals the physics, the chemistry, the physiology of nature in true relations, and makes us act accordingly—makes us obedient to nature's powers.

Now, horticulture affords a most interesting field of activity along this very line of development. None of nature's activities lend themselves more easily to the handling of novices, and none are more suggestive of thoughtful inquiry. Even tho we do not come with Tennyson, holding the little plant, plucked root and all from the crannies, to know "what God and man is," we cannot but grow obedient to nature's powers, and so make progress toward control of nature the first requisite in education. The little tot who pulls up his beans to discover their growth quickly learns how to combine soil, moisture, air, and light with the life in his bean for growth.

So I believe in the manipulation of plants in horticulture, as Professor Lazenby has proposed, because it lends itself so readily to the problems of nature. It is most naturally correlated with botany, extending acquaintance to the whole of the vegetable kingdom. It stands close to the great facts of zoölogy thru insects that help or hinder the horticulturist. It leads thru necessary qualities of soils into the wide range of geology, even dynamic geology, that prepares and distributes materials and controls climatic conditions. It especially furnishes a basis for geographical study, illustrating in vivid ways the reasons why bananas come from Florida or the West Indies, apples from Michigan and New York, and peaches from the tempered belts of northern lakes or the sheltered hills of Maryland and Kentucky. It helps to a study of those great and growing commercial interests that will soon make nations less exclusive, and every boy and girl a citizen of the world, with world-wide interests.

I favor manual training in horticulture for schools, especially rural schools, because it is so easily adapted to the various ages of pupils and the various circumstances of the schools. Given the interested teacher, there is no school of any grade where the experimental garden, the model kitchen garden, the children's garden beds, may not afford most excellent training in the very essentials of understanding things, books, and people, and the elements of wisdom. The immediate fad of our generation may be nature teaching, but it will be a genuine advance, if thru the school garden the children can learn to study by handling the nature which teaches them. It can be saved from being a mere hearsay about nature thru training the hands of the children in manipulation of plants.

Finally, I am a believer in horticultural training, because of its direct utility. The true end of all genuine education is usefulness, after all, and the man whose training enables him to be most useful, wherever he may be, is best equipped for this life and any other. Horticultural training has an almost universal application. A physician of my acquaintance gained the confidence of a whole region in country practice as much by his advice in horticulture, free to all, as by his skill in medicine. Many a minister could serve both himself and his people better by closer contact thru common interest in gardens, orchards, front yards, and parks. Let us not disparage any education which makes a human being more useful to self, to his neighbors, to his race. The chances are all in favor of any genuine discipline which adds an ability in things which concern the world of people among whom we live.

REPORT OF COMMITTEE ON HINDRANCES AND HELPS TO MANUAL TRAINING AND INDUSTRIAL EDUCATION

A circular letter which was sent to two hundred and twenty-five educators associated with twelve classes of educational institutions located in thirty-nine subdivisions of the United States, asking, "What influences retard and what promote the interests of manual training and industrial education in educational institutions?" was very generally answered.

Of the retarding influences there are mentioned:

INEFFICIENT SUPERVISION

Boards of education do not appreciate the educational value of manual training. Wishing to be considered as standing in the forefront of educational progress, ambition and pride spur them to install this feature of school work. Too often there is a degree of indifference as to whether or not the returns justify the expense incurred. One board accepts the gift of an expensively equipped building for manual-training purposes, to find that its maintenance is a burden almost unbearable. Another board permitted the organization of an independent manual-training school, thereby crippling the established high school. Its failure ruined the prospects of such schools in that vicinity. The superintendent of schools of a small city concluded that, since the purpose of manual training is not trade teaching, his power of ethical insight would enable him to teach the classes. Failure attended the effort. A manual-training committee appoints an inefficient director of manual training, who follows the methods of the shop regardless of educational principles. Narrowness of purpose, misdirected zeal, system deformed to the "lifeless level of uniformity," high regard for non-essentials, and disregard for educational practices are too frequently manifested.

ENGAGING MECHANICS FOR TEACHERS

This is a serious impediment to the progress of manual training. The possessor of mere skill in handling tools who lacks the culture of the trained teacher may be quite successful in imparting to youth a knowledge of the use and care of tools, and of the manipulation of material. This, however, is the limit of his very narrow field of labor. Very rarly do we find the qualifications of the teacher innate in the mechanic. He is enthralled by mechanical habit from which he is unable to free himself. If, by chance, he yields to instruction designed to lead him into the pedagogical highway, his yielding is but temporary, for such is the force of habit that he unconsciously returns to those economic views and trade practices which have dominated him so long. The mechanic generally does much of the work for his pupil, especially in those critical and highly valuable points which require extreme accuracy of measurement and great skill of hand. By so doing he unconsciously weakens his charge in more than one direction. The contrast between the culture of the professional teacher and the awkwardness of the mechanic posing as teacher depreciates the latter in the pupil's regard. His language is frequently a travesty of English and neutralizes the effect of the language teaching of others. "His (the mechanic's) skill is in handling dead material," not living, growing mind.

UNTRAINED TEACHERS

Of manual-training teachers it is safe to say that fewer than 5 per cent. have received professional training prior to engaging as teachers. "Very few untrained teachers make earnest effort to improve themselves after once receiving an appointment. They ignore teachers' meetings and educational associations as far as possible; possess no educational library; and, being unfamiliar with educational principles, do not secure the desired ends."

ITS ADVOCATES RETARD

"Perhaps the progress of manual training has not been so rapid as it would have been had the introducers of the subject been very clear as to its proper place in the school course, the definite ends it would accomplish, and its scope. In our section of the country undoubtedly too much was claimed for it. Naturally this shook confidence at first, but with the steady reduction of the subject to its true claims has gone on a steady advance in the number of its friends."

"One of the difficulties which has stood in the way of the more satisfactory advance of manual-training interest in the public-school system has been the common and entirely erroneous idea that a manual-training shop for pupils of the high-school grade is about all that is necessary. Very desirable results will not flow from manual-training work until that work is continuous from the kindergarten up to and through the high-school period, and it seems imperative that educationists should so understand it."

CONSERVATISM OF TEACHERS

Teachers are averse to radical changes. "This peculiarity is not by any means an unfortunate one, as it prevents too hasty adoption of ill-considered measures ; but this spirit makes it next to impossible to introduce any new and radical changes until they have been under consideration for a long time."

Conservatism is manifested by "the slowness with which those connected with educational institutions, especially the older members of the faculties, take on new work and new educational thought. In their own departments these gentlemen are educational experts, and in the great majority of cases advance with the times. But outside of their departments they know but little of educational movements; they have but little time to give to consideration of such movements. It is especially true that most of them have but little time for the careful, philosophic consideration of pedagogy, and of relative educational values."

"If there is a retarding influence that is particularly marked, it is the influence of the old educational tradition that has descended to us from our fathers. This tradition has to a great extent been broken down."

DISRESPECT FOR MANUAL TRAINING

Manual training is degraded, in a measure, by relegating it to a cellar, basement, or attic of a school building, parts which do not command the respect of school board, teachers, or pupils. Very frequently they are so dark that artificial light must be used during the class period, thus adding to expenses. and, worse still, injuring the pupils' eyes by causing strain.

Yet we see many of the best schools of the land locate a manual-training class-room in a dark basement or a cellar—schools which are well endowed and cities which are amply able to place it on an equal footing with other branches. It is justly claimed that manual training ranks beside mathematics and science in the benefits it confers upon the pupil; but its greatest influence will not be commanded until its friends and advocates demand and secure for it a position in the school building as favorable to success as are the laboratories of science or the recitation rooms of mathematics.

SHORT WORKING PERIODS AND THEIR INFREQUENCY

Pupils who meet their teacher but once per week for a period of from sixty to ninety minutes in length lose much during the interim between lessons. Sometimes interest waxes less, especially when a pupil spoils his work thru loss of skill and must begin again. Ninety minutes per week is sufficient time for the lower grammar grades, if the work could be done by the regular teacher in the class-room; the teacher who meets the pupils every day and becomes more intimately acquainted with their aspirations, environments, ability, and disposition could do more than he who meets them so infrequently. Ninety minutes per week for forty weeks gives only sixty hours, or seven and one-half days of eight hours each, which time is reduced by necessity of receiving and dismissing classes, by sickness, occasional absence, examinations in other branches, and holidays.

LACK OF FUNDS

"Most institutions are constantly and seriously crippled for want of funds to do well the work which they have undertaken, and therefore dislike to take on new work at the expense of departments already established."

"Lack of means to introduce it in the proper places and in the proper way" has hindered the progress of manual training. "I know of no instance where the work has been dropped after it has been thoroughly tried, except under stress of low treasury."

EXTRAVAGANT EXPENDITURE

Extravagance of expenditure, such as may be seen in some manual-training high schools, which are equipped with a great variety of tools and much machinery, very frequently impedes the establishment of manual-training schools in small cities, by causing the impression upon the minds of visiting committees that such a luxury cannot be indulged in by the community for which they are investigating. Extravagance by means of wasteful use of high-priced material also adds greatly to the expenses and helps to intensify the impression just mentioned.

Concerning the influences which have promoted manual training in the past, the following are mentioned :

STATE AND NATIONAL AID

The state has given aid to manual training in various ways. In one instance, at great expense, a world-wide investigation resulted in a most valuable report which has been helpful to many. It has been necessary, in some instances, to secure legislation permitting the subject to be introduced into the curriculum of the school, thus authorizing the use of school funds for the purpose. State aid duplicates sums raised by local taxation or subscription for manual-training purposes. The adoption of industrial education as a means of arousing and strengthening the moral nature of the inmates of state reform schools is quite a valuable factor in promoting the cause of educational tool work. If its reformative influence is remarkable, how much more valuable is it as a formative influence in the public school! A few state normal schools have aided the cause of manual training by adopting it in the course of study, yet but little has been done to train teachers in that line.

Congress, in passing the well-known land-grant act, by which agricultural and mechanical colleges were permitted and enabled "to teach such branches of learning as are related to agriculture and mechanic arts, without excluding other scientific and classical studies, including military tactics," greatly helped to promote the industrial-training idea. It established for the first time in the history of the United States a number of institutions in which special applications of science and mathematics were to be taught. Many persons were set to teaching mechanic arts, thus popularizing modern science. From these colleges came some of the present manual-training teachers of the public schools. If investigation were to be made, it might be discovered that the influence of the agricultural and mechanical colleges has extended not only to public-school education, but also to the older classical colleges, and that the late modifications of methods and the introduction of scientific studies in the older colleges are largely attributable to that influence.

PRIVATE ENTERPRISE

It is a notable fact that private enterprise has been quite as effective in promoting the interests of manual-training and industrial education as any other agency. It seems strange that such a valuable factor in educational effort should be neglected by educators and legislators until individual effort called attention to its usefulness. This has been the case in many of our large cities as well as in the smaller ones. Philanthropists have been quick to recognize this value, and to respond to the public need by establishing such schools much earlier than would otherwise have been done.

INDUSTRIAL EDUCATIONAL ASSOCIATIONS

Industrial educational associations, the educational committees of women's clubs, and other assemblages of earnest, helpful citizens have shared the honors attending the introduction of educational handwork with the private individuals who pioneered the cause. Vacation schools, charity schools, Indian schools, street waifs' homes, and various other institutions in nearly every city of our land bear witness to the value of intelligent associated effort. The experimentation has been carried on by private enterprise and associated effort in order to show school authorities that they are justified in adopting the manual-training school and in using public money for its support. These associations act as centers of information and sources of inspiration for the public, as well as centers of influence in securing the adoption of the study by initiating rational experiments of a very practical nature.

TRAINED TEACHERS

"A good teacher must be expert in his knowledge of human nature; he must know about the developing processes of the human mind; he must understand the philosophy of education; he must not only be familiar with the best methods of transmitting knowledge, but he must discriminate between methods, and be able to employ the best at the right time."

"What is most needed is teachers who possess sympathetic understanding of human nature, and who will not fail to provide for human interests in the processes they employ. I do want to see teachers (manual training) unite in the attempt to carry out vital educational principles in the processes they employ, principles set forth by all great educators."

To the securing of trained teachers "there can be no more useful nor more effective agency than the state normal schools, and their full duty to public education will not be met until they are aggressive factors in the further development and complete application of industrial training."

Complete success of manual and industrial training in the future will depend very largely upon the independent, enthusiastic, self-directed investigations of professionally trained teachers.

PUBLIC EXHIBITIONS

Expositions of manual-training work have aided the cause very materially by exciting the interest and by gaining the moral support of the public, and more especially of those educators and other persons who are familiar with tools. Such exhibitions show very clearly the possibility of handwork for developing orderly, logical methods of procedure. The chief value of educational handwork, the effect upon the pupil, is not, nor can be, an element of a public exhibition, except that the product shown partially expresses the value of the mental effort of the pupil. This partial expression is read by him only who can interpret it aright. We all know that a valuable residue always succeeds rational effort and conditions higher effort. "An immediate return, either pleasurable or profitable, is the stimulant for the child's willing action, therefore it dampens the ardor of the pupil somewhat to keep his work for an educational exhibit. Were a finished product carried home upon its completion, it would be seen by many who do not attend school exhibitions, and would result in securing rational moral support from whence it is slowest to come."

CORRELATION WITH OTHER STUDIES

If a rational correlation of manual training with other studies were an accomplished fact, its value as an educational factor would be greatly enhanced in the minds of educators and patrons of the schools. Such correlation is at present dependent upon the effort of the professionally trained manual-training teacher. His effort alone is not sufficient to the satisfactory accomplishment of this end. To perfect the correlation, the aid of the teachers of other branches will be essential. This will necessarily require a better understanding of the value of manual training by those teachers, and the intelligent co-operation of both classes of teachers. The conservative spirit existing among teachers of grammar and high school grades will hinder this correlation for a long time to come. Indeed, it may become necessary to require grade and high-school teachers to pass an examination in manual training in both its theoretical and practical aspects, just as it has been necessary to do in regard to drawing and music, before they will be willing or able to join forces with manual-training teachers.

Such examination is not yet required of manual-training teachers. Before this can be demanded as a requirement, there must be some previous preparation on the part of the teacher, which preparation must be preceded by ability on the part of educational authorities to arrange a course of instruction for teachers with that end in view. Such ability is not yet manifested in the action of educational authorities, and the whole matter of establishing manual training is left to its teachers, whether they be trained or untrained.

The mutual relation existing between history and geography is quite generally understood, and teachers use the one to aid in teaching the other. There exists as intimate a relationship between manual training and mathematics or science as between history and geography. It is also possible to correlate manual training with language study more closely than has yet been attempted by its advocates.

The teacher is expected to know the relation of the subject-matter which it is his special province to teach with that which precedes and that which follows. A school course is a whole, with its parts arranged and adapted to the stages of development of the child. Manual training is held aloof from the unity of the school course; it is only nominally a part of the course. Its present status will continue until an intelligent, persistent effort is made to place it on an equal footing with other branches. When correlated with those branches it will command the respect which is its due, because it will then be able to accomplish those rational ends which, at present, it only approximates.

GEORGE A. ROBBINS, Graham School, Chicago,
Chairman.

J. L. SNYDER, President Agricultural College, Michigan.
A. J. ROGERS, Principal High School, Milwaukee, Wis.
J. E. HOYT, Superintendent of Schools, Menomonie, Wis.

NOTE.—There are many other points on both sides of this question which are worthy of consideration, but which could not be brought within the limits of this paper. Among them are the influence of the sloyd and polytechnic schools; of the college and the university; the miscomprehension of the subject by the general public; the influence of freehand drawing and art studies; of the National Educational Association; of the kindergarten; of industrial education of the freedmen of the South; and of child-study.

DEPARTMENT OF ART EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—FRIDAY, JULY 8, 1898

The department met in Luther Place Memorial Church, and was called to order by the president, Miss Harriet Cecil Magee, of Oshkosh, Wis., at 3 P. M.

Professor Howard Helmick, of Georgetown University, welcomed the members of the department. The president responded, and followed with her address on "Nationality in Art."

A paper was read by Mr. Fred H. Daniels, of Buffalo, on "The Supervisor of Drawing in the Public Schools." It was discussed by Mrs. S. E. W. Fuller, supervisor of drawing, Washington, D. C., and Miss Gertrude Stoker, supervisor of drawing, St. Paul, Minn.

Professor M. V. O'Shea, of the University of Wisconsin, read a paper entitled "Some Pedagogical Principles which should Govern the Teaching of Drawing," which was discussed by Mr. Ernest L. Major, Normal Art School, Boston, Mass., and Dr. Langdon S. Thompson, Jersey City, N. J.

The report of the committee appointed to consider the relation of the library to art education, consisting of W. M. R. French, director of the Art Institute, Chicago, Ill.; Professor W. H. Goodyear, New York, N. Y.; Miss Ruth J. Warner, Brooklyn, N. Y., and Miss Emily J. Miles, Denver, Colo., was read by Miss Miles.

Dr. Thompson, of Jersey City, proposed the following resolution:

Resolved, That a committee of ten shall be appointed by the president of the Art Department of the National Educational Association, the president herself being a member thereof, for two purposes:

1. To determine, in the light of psychology, environment, and experience, a proper basis for a course of study in elementary art education, including form study, manual training, drawing, and the study of art works.
2. To outline in a general way such a course of study for the common schools.

After considerable discussion, the resolution was adopted, and the president announced that a committee of ten would be appointed at the next meeting.

It was then moved and carried that a committee be appointed by the president to carry out the suggestion made in her address concerning the co-operation of the various state and sectional art associations with the Art Department of the National Educational Association.

The following committee was appointed for this purpose:

Miss Myra Jones, Miss Emily H. Miles, Walter S. Goodnough, Charles F. Wheelock, and William A. Mason.

The following nominating committee was appointed:

Charles M. Carter, Denver, Colo.; A. S. Downing, Albany, N. Y., and Miss Mary A. Woodmansee, Dayton, O.

The meeting was then adjourned.

SECOND SESSION.—MONDAY, JULY 11

The meeting was called to order by the president at 3 P. M.

The first paper presented was entitled "The Function of Art in the Education of the American Citizen," by William Ordway Partridge, sculptor, Milton, Mass. In the absence of the author the paper was read by Colonel Clark, of the Bureau of Education, Washington, D. C.

Before the discussion of this paper the following resolution was offered by Walter S. Goodnough, of New York:

Resolved, That from this date, July 11, 1898, the affairs of the Art Department of the National Educational Association be administered by the following officers: a president, vice-president, and secretary, each to be elected annually, and three additional members, who, with the foregoing-named officers, shall constitute an executive committee.

The term of office of each of the three additional members shall be three years, unless sooner terminated by failure to continue active membership in the National Educational Association.

The first year one member shall be elected to serve one year, one member to serve two years, and one to serve three years, and thereafter one member shall be elected annually to serve three years.

The resolution was adopted.

The following resolution was also offered by Mr. Goodnough, of New York:

Resolved, That the nominating committee nominate at this meeting a president, a vice-president, a secretary, and three additional members, to form with the three officers named an executive committee, one member to serve for one year, one to serve two years, and one to serve three years.

The resolution was adopted.

The discussion of Mr. Partridge's paper was taken up by E. C. Messer, of Washington, D. C., and John S. Clark, of Boston, Mass.

The writer of the second paper, Miss Roda E. Selleck, of Indianapolis, Ind., being absent, it was voted that her paper be printed in the report, but not read in the meeting.

The subject of her paper, "The Province of Art in the High School," was discussed by J. S. Ankeney, supervisor of drawing, Carthage, Mo.

Under the head of miscellaneous business, the report of the Committee on Representation of State and Sectional Art Education Organizations in the Art Department of the National Educational Association was read by Miss Myra Jones, as follows:

Resolved, That in pursuance of the suggestions of the president, which recommend that steps be taken to secure the active co-operation of the various art educational associations of the country, to the end that the Art Department of the National Educational Association may extend its sphere of influence, and secure concerted effort in the cause of art education, this committee recommends:

1. That the officers of this department correspond with the various state and sectional art educational associations, inviting such associations to secure membership as a body in the National Educational Association, thru a delegate who shall officially represent his association in the Art Department.

2. That such delegates may act in an advisory capacity, suggesting measures for consideration, aiding in the preparation of the program, and promoting the interest in and extending the influence of the Art Department of the National Educational Association.

Myra Jones,
Emily H. Miles,
Walter S. Goodnough,
William A. Mason,
Charles F. Wheelock,
Committee.

The report was adopted.

The report of the nominating committee was then called for, and was as follows:

For *President* — William A. Mason, Philadelphia, Pa.
For *Vice-President* — Charles F. Wheelock, Albany, N. Y.
For *Secretary* — Miss M. A. Woodmansee, Dayton, O.
For the *Executive Committee:*
For one year — Miss Harriet Cecil Magee, Oshkosh, Wis.
For two years — Miss Gertrude M. Edmund, Lowell, Mass.
For three years — Dr. Langdon S. Thompson, Jersey City, N. J.

The report was received, and it was voted that the secretary be instructed to cast the unanimous ballot of the department for its adoption, which was accordingly done, and the nominees declared elected as officers of the department for the ensuing year.

The committee on the course of study was appointed by the president as follows:

Langdon S. Thompson, Jersey City, N. J.
John S. Clark, Boston, Mass.

Henry T. Bailey, Boston, Mass.
Charles M. Carter, Denver, Colo.
Miss Josephine C. Locke, Chicago, Ill.
M. V. O'Shea, Madison, Wis.
Miss Gratia L. Rice, Buffalo, N. Y.
Herman T. Lukens, California, Pa.
Douglas Volk, New York, N. Y.
Miss Harriet Cecil Magee, Oshkosh, Wis.

A motion was made that this committee be instructed to make a report at the next meeting.

An amendment was offered that this be a preliminary report, which was carried.

The original motion, with amendment, was then carried.

The meeting was then declared adjourned.

Florence Browning Himes,
Secretary.

PAPERS AND DISCUSSIONS

ADDRESS OF WELCOME

BY HOWARD HELMICK, PROFESSOR OF PAINTING AND THE HISTORY OF ART, GEORGETOWN UNIVERSITY, WASHINGTON, D. C.

In the name of the art teachers of Washington, I bid you welcome—I will not say to our city, because it is your city as well, the common property of every American, in which we all feel an honest pride. No words are needed to make us friends; if one touch of nature makes the whole world kin, how much more readily should it unite us who are the priests of nature, ordained to make her visible truths more clear and comprehensible!

Perhaps for many of you this is a first visit to Washington. When an American visits Washington for the first time, he is like the heir to a vast estate to whom his steward shows some of his undreamt-of wealth. Every great and admirable thing he looks upon represents the achievements of his ancestors; it symbolizes the glories of the nation which has been built up for him and to which he is heir. He sees the forum wherein our forefathers have grappled with and overcome some of the greatest problems of civilization. Surely every American feels his heirship to the glories symbolized here and reverently acknowledges the responsibilities it entails. Upon the teachers of this country rests the larger share of the responsibility of training our rising millions to the duties of American citizenship. And how great is the part of the art teacher in this task! Let us remember the words of Schiller:

> O, artist with this consigned:
> The liberal culture of the human mind;
> With thee to rise — O, listen and revere!—
> With thee to rise, with thee to disappear!

The oldest of us can remember when the art teachers of America represented a forlorn hope, tho I am glad to see that few among you have your memories burdened with so sad a recollection; but now we find our work acknowledged as an important aid in human establishment—nay, we foresee great and enduring achievements from a national art whose beginnings are humble, in our case, since to create a national art we must educate the people whose knowledge and sympathies shall foster and encourage it, as well as the genius who finds life and strength in that encouragement. It is our aim to give every boy and girl a wider enjoyment and understanding of what they see in nature and art; we are diminishing the necessity of submitting the gleanings of our eyes to an artist before we dare to enjoy its fruits. Not many years ago few people ventured to form an opinion of a landscape or a picture without referring to a professional artist, as if we were to withhold the thrills inspired by beautiful music until the sanction of a skilled musician was obtained. Are you not, I ask, immeasurably enriching the lives of your pupils when you enable them to distinguish the true from the false in visible nature, the beautiful from the ugly?

Education in art, as well as in all other branches, is in an experimental stage with us. The old, rigidly defined lines of class education are no longer suitable to the broader civilization of our democracy. It is admitted that art education is an important factor in the progress of our country. But the methods of teaching art are still misunderstood and confused.

It seems to me, indeed, that this conference is invaluable to you. You come here with varied experiences from different fields of labor, albeit the aim of your work is the same; and, by comparing your difficulties and interchanging your ideas as to the solution of them, you enrich each other and form a concrete idea for the good of all.

In the intermissions from your more serious occupations you will find pleasure in visiting the National Library (that munificent foundation, the Corcoran Gallery and Art School, is unfortunately closed pending repairs), the treasures of the Smithsonian and National Museum; while in your excursions in search of the picturesque, altho you will not find on the Potomac and in the surrounding landscape that alternation of rolling hills and fruitful valleys, nor the mountain grandeur, nor the wild coasts and surrounding seas, nor the tropical luxuriance familiar to one or another of you, still you will find a quiet charm hereabout—a negation in the way of any sectional extreme of scenery—a middle ground of scenery, as it were, eminently fit to characterize the capital of a country so vast and diversified as our own. But it rests with the teachers of America that the intellectual aspects of our capital shall not be mediocre, for this capital is made of the thoughts and aims of every man and woman in this wide land. Let us strive that in future ages it may nobly fulfill its mission.

Ladies and gentlemen, in the name of the art teachers of Washington, I bid you welcome.

PRESIDENT'S ADDRESS

BY MISS HARRIET CECIL MAGEE, STATE NORMAL SCHOOL, OSHKOSH, WIS.

Members of the Art Department of the National Educational Association, Ladies and Gentlemen:

"We are all here of one accord" to consider for a brief period one of the elements of happiness — one of the elements of true education. "The base of all artistic genius," it has been well said, "is the power of conceiving humanity in a new, striking, rejoicing way, of putting a happy world of its own creation in the place of a meaner world of common days; and the artist is an inventor of beauty." When an artist represents his personal vision of nature, he reflects into the artistic representation something of his own soul and something of the soul of his country. Hence we have what may be called individuality or personality in art, but which, when it pertains to a nation, may be designated nationality in art.

Gathered here, as we are today, in the great capital of a great nation, it seems fitting that for a moment, at least, we consider this subject, "Nationality in Art." It is eminently fitting that we should consider this subject here in Washington, which has for so many years been a national art center. We are apt, perhaps, to think too much of New York city as our great art center; and I cannot refrain from quoting a certain art critic, who made this remark a few weeks ago, and was so quoted in the Washington *Post:* "Washington is one of the best markets in the country for really good paintings. Washingtonians are more artistic than New Yorkers. New York is still in the Bouguereau stage, while Washington has advanced to the sheep stage of artistic development."

Be that as it may, ladies and gentlemen, we may congratulate ourselves on our being here; and in this atmosphere naturally turn to the element of national distinction in the art world of which we are, at least, a fractional part.

Nationality in the art of a country is plainly visible in any national collection of art works. No one can visit the famous art galleries of Europe without noticing the distinguishing characteristics of the several nations represented. The French he finds distinguished for their technique rather than for their depth of thought and profound reflection; the Germans display great strength of color and composition; and the English are noted for the literary element making English art somewhat illustrative of England's time-honored history and literature. But nowhere is nationality in art exhibited more strongly than in a Spanish gallery. One critic has truly said that a visit to a Spanish art gallery is in some respects like an eighteenth-century visit to a chamber of horrors.

However, the highest art is not national. It does not delineate the man Spanish or the man Greek, but the man natural, the man universal. "It is," says Voltaire, "the representation of these permanent, general principles of expression which characterizes the works of the great Italian masters, and which is found in such perfection in Grecian art."

It is this great, leading principle of universality upon which all works of genius are considered. It particularly distinguishes all true poets. See how it marks every page of Shakespeare. His Iago is not an Italian, his Othello a Moor, his Lear an Englishman, or his Hamlet a Dane. They are citizens of the world; the masterpieces of universal feeling, of universal sentiment. To illustrate still further that the highest art is the expression of universal feeling and sentiment, take a portrait of a mother and child painted by Van Dyck, now in the Louvre. It is said that nearly everyone who looks at this picture thinks that he discovers in the child's face some resemblance to a child of his acquaintance. The picture is, in fact, an exact portrait of a beautiful young English girl. Whence, then, this discovered resemblance? Simply because it is true to nature in its attitude and expression. Unaffected, universal childhood is here represented as it exists in every child until driven out by false education.

Standing here in the nation's capital, may we not ask: What of our own art? Is it national or universal?

The United States has been called the "*omnium gatherum* of diverse peoples." The art exhibit of the United States of America at the Columbian exposition bore a closer resemblance to the American loan collection than it did to itself. This was due to the fact that as yet there is no great school of American painting, because American painters study abroad and, almost without exception, work abroad part of the time. Hence, when they exhibit their paintings in America, we see the artist's interpretation of a European scene, with European costume and details. There is nothing American about it.

Yet, in its very lack of national characteristics, may it not be that American art is the more truly a universal art, made so by the mixed nature of our people? There is one thing that may be said of American art: that America breathes thru her pictures a frank atmosphere of happiness, a ringing affirmative answer to the question: Is life worth living? America is decidedly optimistic, and this national characteristic is revealed in its art, whether the subject is European or Asiatic. In one phase of its art work the United States leads the world; and that is in landscape painting. Even European artists have acceded this honor to America. It must, moreover, be remembered that American art is but in the secondary stage. The first stage was one of sentiment and feeling struggling for expression. This age is an age of technique. Men, aside from artists, are not interested in technique. The first age of American art corresponds to Greek art. In the early age of a nation the ideas are strong and vigorous, but the methods of expression are limited. At a later date, when the means and methods of expression are multiplied, the ideas are not, in many instances, so strong and vigorous. We are still in the secondary stage. As William Walton says: "If we have not yet reached the Umbrian or Venetian school, we may be considered to have passed the primitives and Giotto's O." Benjamin West may be counted typical of the first period of American painting. He reflected the good and bad of his age.

The second stage of American art may be considered as beginning in the revival of general interest in art in this country in the year of the centennial exposition of 1876. One writer on this subject moves it back forty years from that date to the occasion of a little social gathering of the painters of New York city in 1825. The American Academy of Fine Arts was founded in 1802. But in 1805 the aged Trumbull, as its president, was not in sympathy with the younger and more progressive artists, and hence the organization of the National Academy of Design, with Morse as its president. In 1841 the elder institution expired. Its effects were purchased for the sum of $400. The first exhibition of the new academy was held the year previous, and from that time on annual exhibitions have been held in America.

The Pennsylvania Academy of Fine Arts was founded in 1805. The Philadelphia School of Design for Women was founded in 1853. The first exhibition of the American Society of Painters in Water Colors was held in 1867. In 1854 Peter Cooper laid the foundation of the Cooper Institute. In the following year the Boston Art Club was organized. The plans for the Corcoran Gallery of Fine Art were made in 1859. The Brooklyn Art Association was organized in 1861; and in the same year was founded the School of Art in connection with Yale College. The San Francisco Art Association was organized in 1871, the Art Students' League of New York in 1875, the Society of American Artists in 1877, the Central Art Association in 1894; and many other organizations, too numerous to mention, are now doing a good work in the development of art feeling and the growth of American art.

These organizations are the great art organizations of the country. But these have been founded for art's sake, and carried on by artists of great power and genius, who have devoted heart and soul to their work. The work thus accomplished has been great and far-reaching, until it has permeated society and even percolated the somewhat unyielding soil of the public-school system, until the public-school system of the United States of America, surpassed by that of no other nation, has for twenty — thirty — years considered seriously the problem of art education. And now in almost every town and hamlet in this broad land some attention is given to drawing in the public schools, to schoolroom decoration, to art experiments in the child-study problem, and to the training and development of the higher and æsthetic nature of the American child; until today we find all over this broad land many organizations of a purely art educational character, such as the New York State Art Teachers' Association, the Massachusetts, or New England, Art Teachers' Association, the Western Drawing Teachers' Association, and the California State Art Teachers' Association. All of these are working along the line of art education in the public schools; but each of these is more or less sectional. While each is doing a great and good work in its state or states, there is not the combined effort that there should be; and the Art Department of the National Educational Association finds itself but another isolated organization, while some of our able educators feel that it is limited by too much machinery. One art educator wrote me in reply to a request to participate in the program of this meeting: "I have long since given up the hope of accomplishing anything through such a great machine as the National Educational Association."

Ladies and gentlemen, is not the work of the world, small and great, in this the last decade of the century done by the great machine? But what of the directing force back of the great machine? Is it not brain power? And is there not enough brain force in the educational machine to turn the wheels and manipulate intelligently the art movement of the times? Is it not our duty here at this meeting to set in motion a movement that shall be far-reaching and truly national? Are we not here for a purpose? We, the members of this department, are too busy and too hard-worked to come here for play. We are here for a purpose. We are not gathered for naught. What may we not accomplish if we occupy ourselves with earnest, living questions, and work to a purpose? This department should be national in the true sense of the word. It should not be merely another art educational association; it should be *the* art educational association. By this I do not mean that the other organizations should cease in their efforts to advance art interests in sectional districts, but that they should work together with this department for a national art movement.

It has been my privilege to know intimately the workings of the Western Drawing Teachers' Association since its organization in 1894. It has done, and is doing, a great work in the middle West. Its honored president is here today, a member of this department. I understand that there is a movement to form an eastern association of a similar nature. As I have already enumerated, there are many art educational societies all over this land, which should, it seems to me, work with more concerted effort, and they would so work if a plan were formed whereby they might be represented in a general committee on national work. Inasmuch, therefore, as nothing of this kind has been attempted, and inasmuch as a need of such co-operation is felt on the part of the Art Department of the National Educational Association, I now, at this the first session of our department meeting, wish to appoint a committee to consider the question and report at our next session. I would suggest that such committee recommend that each existing art organization in connection with the public-school system of any state, or states, be requested to appoint one person to act in conjunction with the president of this department in the formation of a program for its next annual meeting, and as an advisory board to be consulted upon all points of general interest to the department.

Does such a suggestion meet your approval?

This, I believe, will do more toward bringing the Art Department of the National Educational Association into proper relations with these various strong art movements, and into just relations with the association of which it is a department, than anything else possible at this time in our history. This will bring into the department the wisdom and strength of the East, West, North, and South, until we shall feel that the department is truly national—national in its breadth and purpose, national in its strength and unison.

Furthermore, it has been suggested to me during the year that greater attention should be paid to the unification of art instruction; and that for this purpose an able committee of ten prominent art educators, from different sections of the country and of varied lines of thought, be appointed to render a report to this department at some future time.

THE SUPERVISOR OF DRAWING IN PUBLIC SCHOOLS

BY FRED H. DANIELS, SUPERVISOR OF DRAWING, BUFFALO, N. Y.

The supervisor must be a teacher of far more than ordinary ability. As a rule it is the business of the supervisor to teach when visiting a classroom, rather than to listen to the grade teacher. She needs concrete help and suggestion, not criticism and fault-finding. Teaching is a profession involving so many side issues that it is especially open to criticism. It would be folly to assume for a moment that the teaching of the supervisor is exempt from discussion among the many grade teachers in whose room he gives lessons. But I am convinced that the true supervisor has the necessary faith in and enthusiasm for his work to throw aside all personalities. Working only for the good of the pupils in each class, no capable supervisor will attempt to build up a teacher's work by complaint and grumbling. Instead, he will earnestly try to do with her class what she has failed to do. If his lesson is a success, he will have helped the teacher in these two ways: he has shown her how to teach one lesson, and he has left the class eager for the next drawing period. If his lesson is not a success, I believe we can find a reason for the failure.

We will take it for granted that the supervisor knows his subject; this feature of the lesson will not be criticised by the grade teacher. Because of this specific knowledge of some specialty, which frequently places the grade teacher in the attitude of a learner, it is a common belief that the supervisor is a mine of instruction in applied pedagogics. Thus any defect in presenting the lesson weakens his influence with his teachers along all lines.

Who has not heard the specialist who presents his subject in numerous words, none of which have any meaning to the class? Presupposing an equal knowledge of subject-matter, why is the lesson given by A better than that taught by B? I believe the success of A is due to his comprehension of the object-matter, i. e., the child. He watches the effect of each question, of every gesture and blackboard sketch, and soon learns that some methods appeal to the child. He learns that the child is alive and enjoys, and even demands, a part in the program. He understands that a lifeless manner will produce a lifeless class, that enthusiasm is the most contagious disease of the schoolroom. This manner of teacher leaves a trail of interest in his subject which will aid in making it a joy rather than a burden to teacher and class. If teachers and pupils do not gladly welcome the special teacher, his work may not be an entire failure, but assuredly it is not a complete success. He is in an exalted position which everyone, excepting himself alone, knows he does not satisfactorily fill. We all understand that the drawing teacher should have had the best training in drawing. Next to that, and of almost equal importance, is it that he have exceptional teaching power. The supervisor who has these two great qualifications for his profession will seldom be found wanting in lesser matters.

In the large cities it is practically impossible for the supervisor to teach in every schoolroom. Assistants are provided for that purpose who regularly visit stated rooms. These assistants, if capable, are of great aid to the supervisor; in fact, each is practically supervisor of drawing in several buildings. There is, however, a feeling among teachers that they are responsible to a higher authority in drawing than the assistants. Hence it becomes a necessary part of the supervisor's work to visit each room in the city to look over the drawings. Inasmuch as the work in the same grades is more or less uniform, this is the most monotonous phase of supervising. Yet, if each teacher can be made to feel that what she is doing is of as much importance as that of any other teacher, that her co-operation is essential, and that the supervisor appreciates all her efforts and is more than willing to aid her in any way, then is the spirit of his work made manifest to the thousands of children in the schools.

A second work of the supervisor in the schoolroom is to ascertain what ought to constitute a course in drawing, and in what order the various subdivisions of art education ought to be presented.

The past history of drawing can be briefly stated as a progression from copying thru stick laying, paper cutting, clay modeling, and type solids to pose drawing. Up to a recent date this history is a record of failures, because all courses have been planned for adults. None, until within a year or two, have recognized the evolution of the child as a factor of any importance in the work. These courses formed excellent and apparently logical printed outlines and drawing books. The school committee could read therein the complete process of teaching a child to draw. A supervisor was engaged to teach this or that system. Superintendent, committee, and teachers swallowed the whole thing without question, and yet have any of these systems withstood the test of a few years' trial without many changes? They have been prepared by logicians, artists, and teachers dealing with older pupils. Modern methods have been fiercely contested, and, when finally adopted, have been entirely overworked. Has this not been true of copying, stick laying, paper cutting, modeling, and the type-solid idea? Is it not true today of pose drawing? Psychologists tell us that the human figure should be the basis of all primary drawing. Philosophers urge that the type solids are the fundamental elements of all art. The gradgrinds say that art is a science. Others sing the song of correlation. Amid all these theories, what is the supervisor to do? There is but one right answer to this question: Go into the schoolroom and teach children in all grades, watch them at work, study their likes and dislikes, see what is being done in other studies, "prove all things, hold fast that which is good."

Thus far we have considered the supervisor as a schoolmaster. The work in the schoolroom forms but a minor part of his daily program. I can imagine no profession which demands more continuous outside preparation. The supervisor is expected to be an artist, an art critic, and lecturer. He must be informed regarding all art, past and present. He is supposed to know all about the history, science, and art of school-teaching. Two things he must do whenever possible—work for greater power in artistic creation and expression in form and color, and study along pedagogical lines. "Not a day without a line," and not a line without a thought of its connection with his great work as a teacher. Every new pedagogical idea should incite a corresponding specific thought applicable to his subject. Furthermore, he should seek the most interesting method of applying this idea in his teaching and teachers' meetings. That method always involves a blackboard sketch. Thus these two great factors in the supervisor's work, art and pedagogy, are interdependent.

One of the most important duties of the supervisor is conducting teachers' meetings. Before attempting to decide upon the plan of these meetings, we must recognize several factors which confront most of us in our towns and cities: (1) In many places only the mechanical phases of drawing are thought to be of sterling worth. (2) The average teacher can present a lesson efficiently, oftentimes better than the supervisor, providing she knows the subject-matter. (3) Interest is the best incentive to effective work. We are not interested in doing anything the value of which is not apparent. We do not enthusiastically teach a subject which we but half understand. (4) A very small proportion of our teachers can draw. Some have had no opportunity to learn. Others have had state courses, which are often so mechanical and far behind the times that, aside from giving the student teacher almost nothing of real value for her future teaching, they are especially well adapted to crush out any love for art that the student may have. Ruskin criticised these state courses when he wrote: "All things that are worth doing in art are interesting and attractive when they are done. There is no law of right which consecrates dullness. The proof of a thing's being right is that it has power over the heart; that it excites us, wins us, or helps us — and there is no goodness in art which is independent of the power of pleasing."

While the best literature teachers are telling us that the right way to create a literary taste is to give the student good literature to read, rather than to teach the facts about literature; and while our science teachers are telling us that the way to arouse in the pupil a sympathetic attitude toward nature is to have him study nature rather than text-book facts about nature, it is depressing to know that some supervisors still insist upon teaching the rules and facts about drawing to pupils and teachers who have never had very much practice in free-hand drawing. In our optional classes teachers should work in the most interesting medium in the most direct and vital way, to aid them in learning to see and to express and to teach others to do the same. Teach them to draw, paint, and design as they are to teach their pupils. If you have any love for art education in your schools, any desire to foster enthusiasm in the teachers' efforts, throw aside all the dry bones of drawing which are not positively necessary for use in the schoolroom. When you hear anyone say that art is a science, you may be pretty sure that the speaker is a scientist and has no knowledge or love of art. Drawing — one medium of art expression — is a matter of seeing, combined with the ability to use the hand as the will dictates. Teachers and pupils have been made to feel that drawing is a science, and that they cannot draw because they do not know the correct rule for the given object. When we get rid of this theory business and in all work for several years rely only on the eye and hand, we shall have more satisfactory results in drawing. The theory of drawing should be regarded as a dictionary of reference by teachers and pupils who are sufficiently advanced to use such aid intelligently.

It has been used as a crutch to such an extent that reasoning has usurped the place of the sense of sight.

One element in particular we must encourage at these meetings. Because creative activity, individuality, has been so largely neglected in previous school-teaching, it is sometimes rather difficult to obtain original work from the teachers. But no amount of talk from the supervisor will produce the best final results in the class-room when the teacher gives the lesson. The actual illustrative sketching, making of designs, etc., by the teacher is what is needed. In his essay on *Spiritual Law*, Emerson has said : " The same reality pervades all teaching. The man may teach by doing, and not otherwise. If he can communicate himself, he can teach, but not by words. He teaches who gives, and he learns who receives. There is no teaching until the pupil is brought into the same state in which you are ; a transfusion takes place ; he is you and you are he ; then there is teaching, and by no unfriendly chance or bad company can he ever quite lose the benefit."

I am sure that we all feel the need of general culture, so that we may appreciate and act in unison with the best thought in all trades, professions, and arts. This suggests an unlimited field of work for the supervisor. I have endeavored to bring to your notice only what seem to me to form the absolutely essential requirements for successful supervision. Permit me to summarize : The supervisor should have a thoro art training. He must be a strong teacher, a student of childhood, and an honestly independent thinker and worker. He should draw and paint at every opportunity, study pedagogics, hold helpful grade meetings, endeavor to become an effective speaker, apply his knowledge of art to his personal appearance and surroundings, and strive for general culture, both mental and physical.

Surely the supervisor has no time for idleness.

DISCUSSION

MRS. S. E. W. FULLER, director of drawing, Washington, D. C.—The first thought that presented itself to my mind on learning the subject assigned to me in this discussion was of the varied conditions to which supervisors are subjected and the consequent futility of anything I could say in regard to details.

No capable supervisor desires that anyone not familiar with his field of work should advise him as to his special duties in the schoolroom.

Unity requires that every supervisor shall adopt a plan by which he can insure and know that each teacher carries out the program assigned to his grade, and that he shall endeavor, by his superior knowledge and love of the subject, to infuse into the work of each that life without which the best course of instruction becomes a skeleton of dry bones. Whether his way of doing this will be mainly by giving lessons in school, examining work, by helpful criticism of methods, or by a judicious use of all these means as occasion seems to demand, will probably depend not only on the local conditions, but very largely upon which weapon he can wield most effectually. If he is wise, he will also be influenced by the capabilities and disposition of the teacher he attempts to guide. Here I would add to the qualifications of a supervisor, as summed up in the paper to which we have just listened, one other: a knowledge of teacher nature. Child study is, indeed, an important factor and should be diligently pursued, not only in the schoolroom, but in the home, on the playground, and in the street; but, after all, it is the teacher thru whom we reach the child. Teachers have some traits in common, but they need to be individually studied. The best help for one may not be the best for another.

One problem faces every supervisor: he can never ignore the fact that, altho art instruction is so extended in its application that it seems to its lovers a world in itself, it is still but a part of a whole.

Whatever may be our individual views of correlation or co-ordination, co-operation is something we cannot ignore, and I hope it is a subject upon which the light of some real schoolroom experience may be thrown during these meetings.

But in the formative period, thru which the organization of this great work has been and is still passing, supervisors have been called upon to do more than this: to organize and direct. They have been chosen for their ability to do this.

Some have arranged courses of study after their own ideas. When a published system of text-books and manuals has been adopted, the supervisor has usually had a very decided voice in its selection; also freedom in adapting it to conditions and in the introduction of such new features as he may have thought desirable.

The experience gained by the freedom thus accorded has reacted upon the published courses, so that at present they are largely the product of that experience.

This individual work in the schoolroom, which my experience leads me to consider a past and present condition, is referred to in the paper to which we have listened as a hopeful one for the future.

It is and always has been hopeful; moreover, it is just this which has caused the evolution of motives and methods: the changes referred to in the paper as failures. I object to the word failure. If we are to call these features failures, then must we designate all the steps by means of which we have reached our present status in every department of education and science failures. Where, then, is evolution? Are we, as individuals, failures because we are soon to pass away, leaving our work to be continued in ways adapted to the increasing wisdom of future generations? No! All this only shows that we are and have been alive and subject to the laws of growth. The stream is deep, the current strong. It will not be turned aside because a few sticks, tablets, and even, in some places, a superabundance of type solids, as they float on the surface of the stream, are washed ashore or become tangled in the driftwood.

It is our duty, as supervisors, ever to seek for the best methods of doing our work; but we should not belittle it or be discouraged because of changes. We must even have patience with that most trying of all experiences, the overworking and indiscreet applications of new suggestions. It is the tendency of our people to go to extremes. If, in the reaction which always follows this excess, we can retain the vital good that lies at the root of all these movements, we shall be in the line of progress.

There is also a good to be evolved from the intensity of interest aroused in certain subjects during this period of excess; a real good, because it is based upon a psychological principle that no true teacher will ignore, namely, that the time to impart information is when the mind, thru aroused interest, demands it, as impressions made at such times are most likely to be indelible. For example, the present interest in regard to subjects pertaining to the war is invaluable as working material, but we cannot base a system of drawing upon the subjects involved, nor upon any other subject. Subjects are only opportunities. We must dig deeper for our foundations. When we are sure that we have a true psychology to guide us, and are wise enough to frame upon it our pedagogics, we shall be able to base our superintendence upon a system strong but elastic, an art product with the essentials of unity and variety; unity of principles, variety of subjects; the strength of eternal law, and its elastic quality of adaptation to states and conditions.

MISS GERTRUDE A. STOKER, supervisor of drawing, St. Paul, Minn.—In discussing Mr. Daniels' paper, all that I can do is to indorse most heartily his sentiments, and perhaps emphasize some of the points which seem vital.

What he says about the preparation necessary for a supervisor is true. The reason why for so many years drawing has been considered a fad is that the supervisor lacks artistic, pedagogical, and psychological education.

But where shall the supervisor receive his training? Where is there a school today that unites the kindergarten, the university, and the art school? Unfortunately none such exists. Drawing is degraded in the university, or, rather, has never received that proper recognition which it must and will in time obtain. The experimental psychologist of the university considers his investigations too profound for the comprehension of the kindergartner; art schools aspire to produce artists, disdaining to create pedagogs.

Not until our universities recognize the importance of drawing in education, and make a thoro preparation necessary for admission to their courses, and not until our artist teachers understand kindergarten methods, will drawing assume its proper place in education. Our universities must graduate kindergartners and supervisors of drawing. The artist must become the educator or psychologist; to draw is not enough; to be learned is not enough; the supervisor must study the development of the child.

Thus far the training of the average supervisor has been left to the tender mercies of some book concern, interested in placing before the public a system of a patent-medicine nature sure to kill or cure.

That the love of drawing still exists in the hearts of some children is no fault of these systems which try to force all to think and act alike, treating originality of thought and expression as a crime.

Most supervisors are mere followers or imitators of others, looking askance at the person who dare be independent in thought and action. It is much easier to let others think for us, but the person who tries to express someone else, and not himself, never leaves much of an impression upon the world.

An examination of the courses of study in drawing thruout the United States will prove to any student of children that as yet the supervisor has very little pedagogical training. In all these courses, with the exception of three or four, the mechanical phases of drawing are of vital importance, with little attention paid to thought expression and originality. Technique is worshiped to the extent that all individuality is lost, drill upon rules of perspective is made prominent, little attention is paid to correlation, and each teacher is obliged to draw a certain thing upon a certain day, which forces her to be a mechanical follower of the supervisor. That the average teacher can present a lesson better than the supervisor is proved by this examination of the courses of study in drawing.

As to teachers' meetings, I was pleased to hear Mr. Daniels' ideas upon this subject. If we follow his suggestions, and at our meetings teach our teachers to draw, to paint, to model, to design, giving to them model lessons full of suggestive help; and if in our courses of study we give them liberty to plan their daily lessons according to their material, instead of one drawing teacher we shall have a city full of enthusiastic drawing teachers who will love their work, and who will assume all responsibility of results. Let us give our teachers liberty, but be sure that our lessons are worthy of imitation.

In my judgment there is but one way to make drawing a success in the public schools, and that is to teach the teachers as we would the children.

Let the results for which we struggle be mental development, not pictures. Let us teach our teachers to see, to express thought, to judge, to manage, to originate. Let us give them paint boxes and flowers, and lead them by experiment to select and mix the proper colors. Don't burden them with theory; it would take a lifetime to learn all there is to know about the theory of color. Let them paint something in the first lesson. They can do it and do it well. Let us give them clay and something interesting to model; don't bind them with method of how to model. What we desire is something modeled which shows observation, study of proportion, etc. Let us tell them a story to illustrate in color, and if, thru their efforts to express the thoughts, they have visualized the story, their memories have been strengthened, and the lesson is a success. Let them paint a landscape, and if thru the effort they learn to observe skies, we have accomplished much.

The supervisor is one of the hardest of workers, but much responsibility is assumed which would gladly be borne by the grade teacher, if liberty were allowed her. Let us work with our teachers, and the time saved may then be spent preparing talks which of necessity the supervisor must make. In these talks let us show the educational side of drawing to our listeners; but first we must know this side ourselves. To speak effectively, one must speak with authority.

SOME EDUCATIONAL PRINCIPLES WHICH SHOULD GOVERN THE TEACHING OF DRAWING

BY PROFESSOR M. V. O'SHEA, UNIVERSITY OF WISCONSIN

In a discussion of the teaching of drawing it is well to recognize at the outset that the method of procedure is not distinct in all respects from that of other subjects. It may be wise, then, to point out at the beginning several principles of universal validity in teaching, and to indicate their bearing in this particular instance. In the first place, the logical or formal arrangement of the facts or principles of any branch of instruction is not ordinarily, if ever, the proper teaching order. An excellent illustration of this is afforded in the case of reading. The logical development of the subject requires that the pupil first learn the letters of the alphabet, then combine these into words, the words into sentences, the sentences into paragraphs, and finally the paragraphs into discourse. But in the teaching of this subject now no competent person follows this method. Psychology declared some time ago, and experience has since proven, that greater success may be attained by beginning at once with the word or sentence, coming only gradually to their most elementary parts, letters. This illustration is typical of others — as in the case of writing, for instance. Logically the most elemental forms involved in letters should precede the letters themselves, which in turn should precede words. But pupils learn to write at the present time most successfully by starting at the outset with the words which are employed to express thoughts gained in their studies in various fields. The distinction between the logical and the teaching order which is thus seen to exist in the case of reading and writing could be shown to exist also in spelling, geography, science, and other branches.

It is not difficult to see why there should be this distinction between a logical and a teaching order in the arrangement of the facts and principles of any study. The former is dependent upon a survey of all the data of the study in their relations to each other, some being discerned to be structurally more simple than others. But structural simplicity is very different from psychological simplicity, and is usually contrasted with it; that which is most simple anatomically being generally of greatest difficulty to be grasped by the mind. In order that a thing be readily and surely comprehended, it must have numerous characteristics which will furnish hooks for one's apperceiving ideas to clutch hold of. On the other hand, the psychological, and so the pedagogical, ordering of the facts of a study is determined by what is already in the mind of the pupil at any point which gives him an interpreting basis or apperceiving mass, and which, as a consequence, determines his interests. Thus in the study of botany the pupil would best begin with flowers and plants as a whole, with which he is somewhat familiar, rather than with an examination of the structure of seeds or the learning of definitions which, while comparatively simple physically considered, are yet relatively unfamiliar to him, and in which he has little or no interest.

The recognition of this important educational law in the teaching of drawing suggests that a formal arrangement of topics, beginning with the most simple structurally, as the drawing of lines or reproducing flat copy, is not the best method of procedure. That which is nearest to the child and which appeals most to his interests should constitute the point of departure; and this is certainly not imitating flat copy, drawing lines, learning definitions, or studying forms, unless all these contribute directly to the expression of the pupil's thoughts while employing them. Before the child enters school he has used drawing as a means of conveying his thoughts and feelings to others, and his interest in it is determined wholly by the use to which he is thus able to put it. So that, considered from this point of view alone, drawing should at the beginning and thruout be taught in connection with, and as instrumental to, the expression of thoughts which originate in the child's creative imagination, or which are gained from the study of objects, artistic or natural. Only gradually should attention be called to the logical and formal elements involved in drawing; just as in reading one should learn the letters only after he has actually begun to read, or should not acquire the definitions in geography before he has concretely gained the ideas embodied therein.

A second educational principle is of equal universality and importance with this first, and is not wholly different from it. It is an unprofitable expenditure of time and energy to attempt to acquire the motor, manual, or expressive counterpart of an idea apart from the mental element thereof.

In other words, the mechanical or formal part of any study may be best gained in immediate connection with the content of that study. This principle is based upon the intimate, almost identical, relationship of motor and ideational centers in the brain. It is satisfactorily shown by neurology that ideas originating in any of the sensory, or, I may say, intellectual, areas of the brain are accompanied by the awakening of an impulse which tends to arouse motor brain centers; and these in turn excite given muscles to characteristic activities. When any idea has thus been accompanied by a certain motor expression for a number of times, there tends to be established such a connection that, whenever the idea is represented in consciousness, the appropriate action follows automatically; and conversely the reproduction of the movement tends to revive the sensory impression. Ideas then, as Wundt says, really acquire a motor aspect. This general law is well illustrated in the case of the pianist: by continual practice he has connected ideas aroused by the sight of musical signs, as notes, staff, etc., with certain modes of physical action, and now, when he sees these signs, the appropriate expression follows unconsciously, or automatically, as we say. It is illustrated further in the case of language, oral and written. The average adult has so fused his ideas with their vocal expression, at any rate, that, when the ideas are present, the vocal apparatus faithfully portrays them without conscious effort or direction. Again, in ball playing an expert will so co-ordinate all the muscles of the body in response to a certain visual stimulus that, at the vital moment when the image of the ball falls upon the retina, he will automatically make the appropriate movements to strike it. Examples might be multiplied *aa infinitum* illustrating the principle, that naturally and normally one's ideas tend to become connected with characteristic motor expressions in such manner as to form automatic series, so that, when a given idea is present in consciousness, the rest of the series rolls off as a matter of necessity.

In order that such a connection may be secured, it is essential that the motor impulse be directly associated with the idea or ideas of which it is the expression, else cerebral paths binding the two together can be established only with comparative difficulty. It would manifestly be a poor method of cultivating the art of speech to require the infant to imitate the sounds of words without associating them with their meaning, that is, with ideas; or, speaking neurologically, and thus also psychologically, without opening up paths between the speech and ideation centers in the brain. Every boy knows that in training for skill upon the ball field it would be a relatively fruitless proceeding to practice movements of co-ordinating the muscles of the body in any other way than by actually playing ball. However superior he became in the exercises of the gymnasium, he would yet be disappointed in his ability upon the field, when he came to test it at the crucial moment. His visual perceptions and muscular co-ordinations have not become so related with eference to ball playing that the one may follow the other as a matterr of certainty and necessity.

The bearing of this law upon the acquisition of skill in drawing must be quite evident. Whatever more the artist may be, he is at least one who, when he desires to represent, has the motor centers automatically stimulated so that they will guide his muscles aright in expressing what he sees, either objectively when viewing things external to the mind, or subjectively when beholding the products of imagination. In acquiring this power he must have had experiences similar in principle to those of the pianist or the ball man or the bicyclist. In the teaching of children to draw it should be one object — not the only one by any means, but yet an important one — to lead them to express their conceptions automatically as they do in language, and this can never be accomplished by striving to acquire a body of motor ideas or expressions independent of the mental things which they are designed to portray. That is, all mechanical work carried on apart from its use in the expression of thoughts is, relatively speaking, a waste of time and energy, to say nothing of its inability to touch the vital interests of childhood, which in itself is a most important consideration. We are appreciating today more fully than ever that the child must acquire these arts, so slowly elaborated by the race, in response to such motive as the race had in developing them, viz., the necessity of using them in communicating his mental life to his fellows. The appreciation of a vital need of a mode of expression can alone invest the acquisition of its technique with genuine interest, which is essential in order to weld together things in the brain. This does not imply, however, that there should be no special attention given to the motor element in drawing, as will be shown farther along.

A third educational principle of general utility should be mentioned in this connection. The mind of the child at first apprehends things in its environment as wholes, with the quality of use predominating, and it comes only slowly, following upon the growth in knowledge, to regard objects as composed of distinct parts which contribute in definite ways to the unity and function of the whole. Where the adult may be absorbed in details, seeking to discover their office in constituting the individuality of a larger whole, the child will be concerned only with the function of the whole, little mindful of what factors that function is the outcome or product. In the contemplation of nature, to illustrate, he is most conscious of what the animals he knows can do, and least of the parts of which any one of them may be constituted — their anatomy, that is. In reading, he grasps the word as a whole, being for the greater part unconscious of the discrete form elements of which it is composed. So in writing, and so it should be in drawing. While it is obvious that any whole may be regarded as comprised of parts which in themselves are wholes, still, as the child meets such things in daily life as, for instance, a man, a horse, or a tree, he regards these entireties as wholes, where arms, hoofs, and leaves would be parts. In drawing, the young child may properly deal with these wholes, and he will not be seriously troubled by the intricacy of their construction, when it would be otherwise with the adult. In the same way he can draw a landscape without experiencing confusion by the multiplicity of details; and he will be more interested in this at the outset than in drawing a leaf or a blade of grass. But as the mind expands it grows continually in analytic power and interest, and in drawing, as in other studies, the pupil should from year to year give increasing attention to the detailed mechanism of things—that is, to analysis. This suggests that pictorial representation, by which is meant a free rendering of things so as to throw emphasis upon some quality or use, no special regard being paid to literal accuracy of detail, should have most prominent place in the early work, and mechanical drawing, study of design, etc., should be left, in the main, until later. We shall have attained more in the end if by the way we make our demands conform to the natural order of unfoldment of the child's interests and capacities.

So much for general educational principles which proffer advice respecting the teaching of drawing. The particular processes involved in this form of expression, aside from apprehending or creating the scene, or thought, or *motif* to be portrayed, are two: first, visual perception, both external and internal; and, second, the fusion of truthful and skillful motor expression with this perception.

It should here be pointed out that drawing, like language, is a medium for externalizing the soul within, and when you speak of the medium you do not at the same time refer to the thing conveyed. In one sense, drawing, like language or writing, is spiritual, when you think of the spirit which is objectified thru it; in another sense, it is more or less formal, when one considers its mechanics as a mode of conveyance. These two aspects are sometimes confounded, much to the confusion of clearness in discussion; for there are those who feel that the spiritual side of drawing will be lost sight of if it be regarded, like language, as a form of expression. But the soul, the real life, the spirit, which is revealed thru drawing should not be confused with the drawing itself; no more than the mind of Shakespeare should be thought to be simply the language he used. In this sense, then, drawing is concerned with the portrayal of thoughts, not with their creation; this latter is the result of all the educative influences that act upon the individual. Shakespeare's language only afforded a means for conveying his thoughts and clarifying them; it did not originate them. So all the pupil's training must develop within him thoughts and feelings to be conveyed thru drawing, which is thus a means, not an end. It may now be apparent why drawing is said to involve only processes of visualization and reproduction, since the spirit to be conveyed, which originates in the depths of the soul, must first be translated into visual terms before it can ever find embodiment in graphic representation. No matter how abstruse the thought, or how delicate the feeling, it must for all time remain unexpressed in this especial way, unless it first appear in visual symbols, and then, in turn, be put into appropriate motor expressions.

In the teaching of drawing, then, two questions must be asked at the outset: First, how may the pupil be led to see, objectively and subjectively, with accuracy and keenness? And again, how may he acquire the art of expressing what he thus discerns truthfully and skillfully? A distinction is made between truthful and skillful expression, since the latter depends upon delicate muscular control and co-ordination, while the former refers rather to faithful, tho not necessarily graceful, portrayal of the visual aspects of form, and goes back ultimately to the connections existing between the visual and motor areas of the brain.

Let us look first at the question: How may the pupil be led to see accurately and keenly? We shall be aided in discussing this by inquiring into the cause of the peculiar difficulty which one experiences in learning to *see* critically. Modern psychology has shown that the knowledge given by each sense is localized in distinct areas of the brain, but these areas are most intimately connected with each other by association fibers or tracts. Knowledge acquired thru one sense, then, readily becomes attached to that gained thru every other sense; and the result is that, instead of having sight-knowledge separated from muscular-knowledge, feeling-knowledge, and taste-knowledge, we have it bound into the closest unity with these knowledges—so much so, indeed, that one does not distinguish between his sight-knowledge of a thing and his other knowledges.

Probably everyone who has not given special attention to the subject will say, on first thought, that he gains all possible knowledge of a thing thru the eye; so, when he feels of an object in the dark, he will have a picture of it, and he will be apt to say that his picture comes directly thru his sense of feeling, little realizing the absurdity of such a statement. The truth is that the knowledge we get thru sight becomes associated with the knowledge we get thru feeling and thru every other sense, and then, when the sight-knowledge is present again, it arouses instantly all the other knowledges, and the mind fuses them into a unity without attempting to single out the knowledge gained thru any one sense. The principle here involved is equally true of visual impressions originating subjectively and those gained from external perception. Alike in both cases the visual data revive data at first obtained thru other senses, and these latter acquire pre-eminence in consciousness, obscuring the purely sight-knowledge.

The result of this is that when the child looks at an object, or summons it forth in imagination, he thinks about its size, which he has gained thru the muscular sense; its taste, which he has gained thru the gustatory sense; and, in addition, he has all sorts of memories associated with the visual impression of the thing, and these crowd forward into consciousness, and entirely monopolize attention. He thinks he *sees* these qualities in the thing, but of course he only infers them from certain visual aspects. Nature has wisely ordained that he should be able to infer them unconsciously, because these are the qualities of things with which he needs to be familiar, for upon their right comprehension depends his well-being. Nature has given human beings eyes, primarily for the purpose of inferring qualities of taste, form, resistance, and the like of the things in the environment, rather than for attaining explicit sight-knowledge respecting them. Upon the pupil entering school, then, and setting about to learn to draw, he encounters the great obstacle that he can see scarcely at all for purposes of representation, altho he may be exceedingly keen in his visual perceptions for purposes of inference.

But how shall the artistically blind be made to see? There is only one answer. They must acquire the power of giving conscious attention to the color values in things, and thus gain in ability to inhibit associated knowledges from taking complete possession of the mind and obscuring sight-knowledge. The eye must, by exalting its own importance, separate itself from other senses, for the time being, and carefully scrutinize the modifications of color which objects present to the eye or to the imagination. It must hold in abeyance old associations and wonted companionships, and dwell upon the visual appearances of things before it. But this is not an easy task, as every teacher of drawing knows, and as everyone who has tried to school himself appreciates better still. But there is no other way known to man by which one may learn to draw. There can be little value in imitating flat copy, except after the pupil has tried to represent the reality, when seeing how it has been represented may help to constrain his attention upon the visual aspects of the thing he is trying to draw. The inspiration and encouragement of seeing anything well done, after one has essayed to do it himself, are of no mean value in any phase of educational work, and, perhaps, especially in this. But copying from the flat at the very outset is useless, if nothing worse, for it does not give the pupil in any degree the power to give attention to the color values of the real objects when they are before him. The drawing of realities, then, which includes the realities of the imagination as well as those external to the mind, is the primary requisite in order to cultivate the power to draw, because in no other way can a pupil learn to give conscious attention to the visual aspects of things.

In the choice of objects for objective representation there is some reason why the conventional or type forms should be chosen at the outset. It is easier for the pupil to concentrate attention upon the appearances of a conventional than of a natural form, since there is associated with the latter many experiences which the sight of it revives and so obscures its correct visual appreciation. But, while the conventional form is thus simpler in a way, it is doubtless also less interesting to the child, and has, in addition, some dangers attending its too early or exclusive use, the most important of which is that, if the pupil gets well established in his mind certain ideal or conventional forms, he in time loses the ability correctly to comprehend natural forms when he sees them, for the reason that, when he beholds the natural form, the one which has typified it constantly will be instantly dragged up by it, and will attain supremacy in consciousness. A too great use, then, of the type at the outset prejudices and corrupts the eye. Besides, a skillful teacher may lead the pupil's attention to the form of a natural object, and away from associated and inferred characteristics; just as in any phase of teaching she has to keep the attention headed, as it were, in certain directions and prevented from escaping into by-paths. The proper use of the type evidently is as a standard to follow upon the employment of natural forms, rather than to precede or supplant them.

Studies of children's drawings show that at first they represent what they know of an object rather than what they see, even when the object is directly before them. A young child's drawings, in other words, are imaginative, even when he is supposed to draw from the object. It is evident, then, that one of the most important means of leading the pupil to clearer seeing will be thru his imaginative or illustrative drawings, wherein he reveals how he conceives the various objects which he represents. By proper questioning, the instructor may lead the pupil to see wherein his representation differs from what he could really see in looking at the things which he represents. In this way, by correction and extension of mental images, the pupil is led to view more accurately external objects; for the character of his image of a horse, for instance, always determines how he will see that horse when he views it objectively. The law of apperception explains this fully, and shows that the mind must necessarily proceed in this manner in the interpretation of its visual or other perceptions.

Imaginative or illustrative drawing, then, must form a considerable proportion of the work of the primary grades, occupying gradually a more subordinate place as the pupil attains more skill in the appreciation of form. A danger must be pointed out here, however. If a pupil continues to represent imaginatively, producing very imperfect representations and repeating them often, they tend to pass into fixed habits, and so limit his growth toward more perfect forms. At any stage in his development in the primary grades every child must be expected to do imperfect work, but he should not be permitted to repeat his imperfections over and over again; but, rather, he should continually pass on to a higher plane under the judicious criticism of the teacher. If, then, in this imaginative work there is not constant criticism, only harm is liable to ensue; just as, if a child should be allowed to mispronounce a word and repeat it, his development would be arrested along this line, because the nervous mechanism would adjust itself in the nature of a habit to this particular act. And the formation of habit in any direction betokens cessation of growth along that line. But as, in the case of language, a child at first talks imperfectly, because nature has not developed the physiological mechanism required for perfect speech; and further as, in the process of natural growth, the child outgrows his early limitations; so, in respect of drawing, we should expect great imperfections at the outset; but these will, in part at least, disappear in the course of normal growth.

Now our second question: How may we establish automatic connections between visual perceptions and their appropriate motor expressions? It has already been pointed out that, by virtue of the structure of the brain, no such relationship may be established between a visual and a motor idea, unless the one is directly connected with the other many times, in the nature of a series. The only way to cultivate the motor element in drawing, then, is by associating it always with actual representation. It might be possible to develop by formal drill the power to perform in an excellent manner all the motor activities necessary to represent a tree, but yet, when the tree was presented to the eye of the pupil, he could not readily make the connections between what he saw and the motor impulse necessary to portray it. But after the pupil has endeavored to portray his thoughts, he may become conscious of a lack of muscular skill to do so artistically and precisely. He will then appreciate the value of drilling to secure this skill, and this drill will be seen to have a direct relation to the expression of his thoughts, and not appear to be something entirely remote therefrom. In all the arts involving delicate co-ordination of muscles there is need for special training to develop skill in the highest degree, but such training should not come until the pupil realizes its necessity.

Finally, it may be said, in closing, that all the principles herein expounded may really, without violence to any, be summarized into one, viz.: Thruout the work in drawing the pupil must have a wealth of vigorous, rich, lively thoughts and feelings to express, and the technique involved in expression must be gained always as means to an end, never as an end in itself. In this way the interest of the child will be reached, he will acquire the power of artistic sight, and will attain motor skill which will be alike graceful and serviceable.

DISCUSSION

Ernest L. Major, Normal Art School, Boston, Mass.—Drawing is the employment of tones that range from white to black, on a flat surface, so as to give an impression of objects as they appear in the round. The instructor, to be able to teach drawing, must thoroly appreciate the means of expression. On a given flat surface, with masses of tones, we are to produce an illusion. Now, to produce this illusion the mind must be trained to distinguish what are the shapes of the masses of light and shade, and their relative proportions. All objects are seen only as they are relieved against a background; so that, to be able to give a representation of objects, we must use the tone of the background with the masses of the lights and darks that constitute their shape. Any representation that does not do this only gives a partial or conventional expression. As the masses or silhouettes are never the shape of the real object, so any method that forces the pupil to draw anything but the appearance of these masses only retards his perceptions and confuses his expression. Consequently the pure outline should never be allowed, as the pupil will use the line only to express where the object meets the background, and by so doing devisualizes himself of the appearance of reality. Also the use of the outline tends to dull his sense for proportion and for the more subtle aspects of nature. In fact, the outline is the last word in drawing, and only a few of the master minds have been able to use it to express form.

The mediums that have usually been employed, such as the pen and pencil, are totally unfit for the easy expression of impressions received, and the amount of attention that the student has been forced to give to the employment of these difficult mediums has prevented him from acquiring the power to visualize, which is the fundamental necessity. The stick charcoal has been found in all great art schools the best medium for drawing, as it is easily handled and can be easily erased, and, with the ordinary white charcoal paper and bread or kneaded rubber as an eraser, is very convenient. Drawings can be made more rapidly with this medium than with any other. Charcoal and white chalk on tinted paper can also be recommended for quick, rapid sketches, especially for those sketches made from life in the class-room.

No great detail should be expected in the drawings in the lower grades, but particular attention should be paid to the masses of light and shade that represent the large proportions. Make the background always just as it appears in nature, and be careful that the object is distinctly silhouetted for the pupil of the lower grades. Effective and quick drawings can be made if the background is first indicated over the whole surface of the paper, and then the masses of light wiped out and the darks put in that compose the object to be represented. This method is especially good where strong effects of light and shade are to be produced, and I have also found it to interest pupils who, showing no particular talent at first, after a brief period of instruction were able to produce very creditable drawings.

After the student has "painted in charcoal," as this method is called, and has acquired a knowledge of tone and values, then pastels or colored chalks should be allowed. I recommend pastel as the first colored medium to be used, because of the similarity of its nature to the charcoal; and experience has shown me that students will produce with it in a short time much better color than with either water color or oils. In the latter two mediums the technical difficulties are so great that, while trying to use them, the students' visual impression becomes confused and is eventually lost.

A judicious amount of copying from examples of the best masters can also be recommended, but great care must be exercised that the examples chosen are suited to the students' individual needs. The Japanese direct the attention of the young to nature by making close imitations of their masterpieces. So, I think, we might likewise establish an appreciation of standard works, thus creating at an early age a more tangible ideal than I believe now exists. In order to accomplish this, make the schoolroom as beautiful as possible, introduce anything that has an æsthetic value. Casts and reproductions from the best works of the past and present are so easy to acquire now that there is no excuse for their absence from the schoolroom. Show taste in everything over which you have any control, and especially be careful that your own personality is an evidence of the art you are teaching. Above all things, infuse the young with an appreciation of the beautiful, because the mature individual is greatly controlled by the impressions derived at an early age. Then, when the pupil has acquired the power of expression and possesses a high ideal, he will realize the unlimited possibilities of our art. This question is by all means the most important, as the expression becomes a simple matter when the mind has a fixed, definite ideal.

Dr. Langdon S. Thompson, Jersey City, N. J.—In order to draw an object in one's sight, knowingly and intelligently, one must be able to distinguish clearly between two things: (1) the real, inherent, tangible shape of an object; and (2) its infinite number of apparent or accidental shapes.

Both of these things are generally called the form of the object, and hence there arises great confusion in discussion as well as in thought. Therefore, in this discussion, let us call the first form and the second appearance.

Then, when one is called on to draw an object, he is expected to draw one of its infinite number of appearances; that is, he is expected to draw a visual percept. We may have many percepts of an object, but the learner must reject all of them, however fascinating, and record only the particular visible percept he has obtained from one position.

This is very difficult for a learner to do. The world rightly regards judgment concepts as far more valuable than appearances, or visual percepts, and the child at first does not know there is any difference. Hence, when he is asked to draw an object, he puts down what he and the world regard as the most important, a judgment concept, instead of a visual percept.

It is not wise, therefore, to try to force the child to make this psychological distinction too early. It took the world a long time to make it. For the world this distinction has only been made in historical times. Why not wait on the child until he is ready in his evolutionary growth to make this great step of separating his visual percepts from his judgment concepts? When this period arrives, the pupil can be taught more genuine object drawing in six months than in two years at an earlier age.

REPORT OF THE COMMITTEE ON THE RELATION OF THE LIBRARY TO ART EDUCATION.

Almost any subject of human activity may be viewed in the three aspects of practice, history, and theory. In art education practice is the predominating element, since manipulation and technique play so important a part in all art production.

It has been remarked that, when you have a good subject, a good light, and a good teacher, you have all the advantages for an art education that the world affords. Like other brief and striking expressions, this saying embodies a half-truth. These things being provided, the essential elements of art practice are present. But the stimulus of numbers and competition, the atmosphere of the subject, the means of studying special applications, the examples of what has been done by others, even the theories of active minds, are worthy of consideration in anything like a liberal art education.

The library naturally concerns art education more on the side of theory and history than of practice, altho it is not without great practical utility also.

It will, perhaps, be useful to define our terms at the beginning. When we speak of *art education*, we usually mean, first of all, instruction in drawing and painting. The best schools prefer the term "school of drawing, painting, etc.," to "art school," as being more precise and less open to question. Art in a high sense, perhaps, cannot be directly taught, but the elements of art practice may be.

In the old controversies in Massachusetts concerning the Walter Smith system of art education, much trouble would have been saved by a clear statement of the distinction between art education and instruction in drawing and painting. Some of the higher critics, especially of the Ruskinian school, denounced the whole attempt as hopeless, because art could not be taught by stated methods. If the term art education had been dropped, nobody could have questioned that simple drawing both could and ought to be taught in public schools.

We shall take the liberty in the present report, to include both the higher and the lower meanings of art education.

It is, perhaps, necessary to consider separately the cases of the special schools of art practice, comparatively few in number, and of the public and private schools of general education in which some branches of art practice are taught.

With regard to the art schools proper, the library can hardly be too large and comprehensive, so long as the books and collections relate directly to art. We include collections, because engravings, photographs, and reproductions of pictures in general find their proper repository in the library. And in some cases it has been thru the library that the community has made its acquaintance with other forms of art. One does not need to be old to remember when the Boston Athenæum, now solely a library, maintained the only public picture gallery in Boston, and kept on exhibition a few casts of classic sculpture whereby it was revealed to youth what that form of art meant. A similar thing has happened in the library at Topeka, Kan., and no doubt in many other places.

The more comprehensive art schools include departments of architecture and of decorative design, as well as of drawing, painting, and sculpture. Probably nobody would propose to teach these former studies without reference books, from which materials of designs might be drawn, and acquaintance with what the architects and designers of all nations have done might be formed. From the practical point of view, it is the students of architecture and design who stand most in need of a library, and it is they who, in fact, most frequent the libraries of the art institutions. Each student sets up from the beginning of his course a scrap of tracings of subjects which commend themselves to him, which gradually forms a reservoir of useful designs selected by the student himself. It seems superfluous to discuss the usefulness of the library to students of this class, for it is one of their main dependencies, without which they could scarcely progress far in their studies.

It is in the other departments, commonly known as the academic study of drawing, painting, and sculpture, that the utility of the library might, indeed sometimes is, called in question. Yet we believe such question can only be raised by ignorance. No student of art would miss, if he could help it, an opportunity to hear a really great painter or sculptor talk upon the practice of his art. Indeed, some of the most stimulating hours in the art school are the familiar talks to students by distinguished artists. Is there such a difference between the spoken and the written word that the *Discourses of Sir Joshua Reynolds* or the *Conversations of Couture* are of no value when printed and read? Handbooks of art practice, altho they may be of value to the solitary student, are, perhaps, of little value to the student under regular tuition, but there are certain special studies in which much that relates to practice may be derived from books. Such are artistic anatomy, perspective, and the construction of the human figure. It is true that these studies must be pursued with much of practical demonstration, but it is also true that they have been investigated by accomplished masters, who have embodied their observations in books; so that there is a whole literature of the subject with which the student may profitably become acquainted. In these subjects, as in all others, there are a few vital books, soon discovered by the student, which treat directly of the subject, while all others are derived, for the most part, from these central works, and only treat about the subject. Connected closely, also, with the practice of art are the collections of reproductions of works of masters by photographic processes, with which the good art library is supplied. The Art Institute of Chicago has in its library sixteen thousand autotypes (large, permanent photographs known as the Braun carbon prints) of works of the masters in the public and private galleries of Europe. These include several thousand reproductions of drawings of the most eminent artists, which are scarcely distinguishable from the originals. They are conveniently arranged in cases, and are accessible to students at all times. Does anybody doubt the practical utility of such examples to advanced students who are practicing composition, or to conscientious students of figure drawing, at any stage?

I have thus far spoken only of the relation of the library to the practice of art. It is the misfortune of some of our schools that they entertain only the idea of actual practice or handicraft, the result, perhaps, of too close imitation of the private schools of Paris, which are known to have produced some excellent artists, and which are assumed, therefore, to be perfect. But it is well known that these schools are conducted for the private enrichment of the managers, and not with the idea of giving a liberal education. The government school, the École des Beaux-Arts, follows altogether a different plan, and surrounds the student with all the material of study. Let it be assumed that the chief strength of the student is to go into actual practice several steady hours a day for a long course of years; nevertheless, the fact remains that the more he knows of the theory and history of his art (and, it may be added, of other subjects), the better he is off. The best basis for the study of the history of art is, of course, such a collection of photographs as is described above. The history of art without examples and illustrations is no more interesting than the history of the printing press or any other human concern. But with such examples as may reveal the influences of different artists and countries and schools upon each other, it becomes of the greatest interest to the student of art; and with the examples must be used the written histories and biographies of which there is an abundance.

Theoretical treatises are of less importance, and usually of less interest, to persons of artistic impulses, but theories of color, or even of æsthetics, ought to be within reach.

Art students will use these various privileges in very different degrees; some fully, some scarcely at all. In fact, art students are very much like other people. It is probably true, as Ruskin says, that artists are chiefly seeing and feeling creatures, not reflective and philosophical personages. It is certain that artistic and literary tastes are quite distinct, and that some distinguished artists know as little of literature as most distinguished literary men do of art; but I think it will be found that most of the permanently successful practitioners of art are men of considerable general attainments. I believe this is true of the leading American artists of today.

THE FUNCTION OF THE LIBRARY IN THE RELATION OF THE LIBRARY TO PUBLIC-SCHOOL INSTRUCTION

Art education should be regarded in two ways, namely: practice in execution, and culture which teaches the appreciation of the works of others. From both standpoints the library can be of the greatest service.

Reference books are needed in the upper grades by teachers and pupils, both in regard to designing and to the study of artistic things. If historic ornament be taught, reference books are very necessary. Collections of plates reproducing good examples of design are essential where an attempt is made to teach design. Mounted designs, so arranged that they may be loaned in sets of twenty-five or fifty sheets, have been made a valuable aid in class work. These designs may be collected from magazines, catalogs, etc. If the simplest, most concise books on these subjects could be obtained in sufficient numbers, so that several classes might have access to the same book at the same time, the helpfulness of the library would be materially increased, as the different schools often reach the same subjects at the same time. Duplicates of a few standard books of this character would prove of greater practical use than a more extensive library.

If the beautiful magazine pictures coming to the library could be classified in sets and mounted, to be loaned to schools, they would form a practical picture library for the schools. The classification should be made by artists, and also by the character of work. Placed in portfolios or large envelopes, they could be used for systematic study in the schools, as they could be hung in the rooms or passed about among the pupils at will. Magazine illustration affords one of the most suitable fields for art study in the public schools, because the material is available in almost every school district; but the work could be aided materially by public libraries.

The binding of art articles from the current magazines, or carefully cataloging them from month to month, would also aid those in search of information in regard to current art matters. The great libraries of Washington and Boston, the work of modern artists, and oftentimes that of the old masters, as well as many times the records of exhibitions, etc., could in this way be studied by those who did not have access to the galleries and museums.

For kindergartens and primary schools a pleasant and profitable method of art study might be that of illustrated picture books. It would seem that the work of Kate Greenaway, Walter Crane, Randolph Caldicott, A. B. Frost, and others of equal attainments, would be a beginning in the direction of the appreciation of good things. For older pupils, such books as those of Boutet de Monvel and other illustrators who understand child life, and who also are worthy draftsmen, would be, in connection with other pictures, material for art training. Libraries could furnish enough of these, so that those who entered into the spirit of the artist and could direct children to learn to enjoy them. should have such books loaned to their schools for a sufficient time, so that they could be hung on the walls, opened each day to new pictures until the entire class had seen all.

The arrangement of the library rooms themselves should be made a constant lesson in art for the community at large. An especially planned children's room would help to educate the children who visit the library, and would often suggest suitable decorations for home, while it could be made a standing exhibition to teachers who were studying the beautifying of their schoolrooms.

The donation to teachers of large magazine cuts, posters, and decorations made for special numbers of the magazines would often furnish pictures worthy of framing for the room. This would, of course, involve wise selection, but as so much help is needed in the matter of selection of pictures, and also so many are trying to solve the problem of economical fitting up of rooms, the libraries could often raise the standard in selection, and at the same time help to make the money raised for beautifying the schools place two pictures where otherwise only one could be afforded.

This all involves a knowledge of the choice of good and evil in artistic things on the part of the library staff, but all art training means that some people must take pains to inform themselves about the subject in hand before undertaking to help others.

Finally, no more practical aid to art work in the schools is possible than a library that is willing to undertake the great work, and to do it wisely and well.

SUPPLEMENT TO REPORT OF COMMITTEE

A list of about two hundred books bearing on art education suited to a small public library, prepared by Miss J. L. Forrester, librarian of the Art Institute of Chicago, 1898. The prices are furnished by A. C. McClurg & Co., booksellers, Chicago. This list does not include books which are rare, expensive, or out of print. It includes about 215 volumes, and the total cost at retail is about $600:

ENCYCLOPÆDIC WORKS

BRYAN: *Dictionary of Painters and Engravers.* Two volumes. Macmillan & Co. $22.50.

CHAMPLIN: *Cyclopedia of Painters and Painting.* Four volumes. Scribner's Sons. $20.

CLEMENTS: *Sculptors, Painters, Architects, and Engravers.* Houghton, Mifflin & Co. $3.

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THE FUNCTION OF ART IN THE EDUCATION OF THE AMERICAN CITIZEN

BY WILLIAM ORDWAY PARTRIDGE, BOSTON, MASS.

Art is no longer a mere vehicle for pleasure, and one can scarcely have patience with the hue and cry of art for art's sake. We recognize that it must today help man to realize in the most profound way the consciousness of his own soul. John Morley has said: "The truth is that nothing can be more powerfully efficacious from the moral point of view than the exercise of an exalted creative art; at once enlarging and elevating the range of his reflections on mankind, even kindling his sympathies into the warm and continuous glow which glorifies and strengthens nature, and fills men with that love of humanity which is the best inspirer of virtue."

I have an artist's dread of pointing a moral; let me then speak of art in its relation to all education and culture—what art has done for past civilizations, and what, with the help of science, it may do for the present. Let me speak of the relation of art to character and national destiny, and you shall draw your own moral and conclusion.

Art, as someone has wisely said, is not a substitute for life, but a key to it.

"Life is greater than art." I have no patience with the egotistical persons who use their art for purely selfish ends; who, in other words, would make art greater than life—in fact, substitute art for life; who will use up, not only paint and brushes and marble, but the enslaved human being himself, in order to create some piece of work that shall astound and startle their world. These men, like Nero, with his plentiful posterity, may fiddle while Rome burns. Such men are the offscourings of the decadent school, the products of a useless, inferior order of living. Simple, honest men, who love their fellows, and who are willing to live and let live, must always feel contempt for the parasite.

Let this, then, be our platform and point of departure.

I believe that art holds a precious boon for this hurrying people. It presents lofty types for their contemplation; it keeps before the mind of the many figures and faces of our national heroes. We come suddenly upon a statue in the jar and confusion of the market place, and, for a moment, the buying and selling are hushed, and the soul is refreshed in beholding some heroic type who has sacrificed life for his country and truth. We are confronted by inspiring faces in bronze, that show the illumination of God-like lives. The spiritual side of life is nourished by such memorials. One cannot escape them. Their mission is to uplift, and their influence upon character, while a silent one, is as potent as that of nature, working her wonders without noise, but unfailingly. Truly Michael Angelo wrote: "The might of one fair face sublimes my love."

Let us carry our statues and our pictures into the homes, and then into the hospitals, to comfort and cheer the sick and dying, and to give to the imagination fruitful suggestions. Let us carry our pictures and statues into the prisons, so that those who are morally sick may be healed by looking upon the faces of the good and great. Crime cannot live with spiritual beauty. Beauty, as Emerson truly says, is a creator. It sings to us of that new life where beauty walks hand in hand with work and duty.

I fancy some one of my hearers may say that all this is the vision of the dreamer, and not the practical man. To him I would reply that art is greatly practical, and for two unanswerable reasons: the first is that it makes for manhood, and the second that it nourishes the most conservative and practical idea man has ever cherished, namely, the love of immortality. It makes for manhood by stimulating our ideas of patriotism and liberty.

So art, by presenting high ideals to the imagination, lifts man above his material possessings and desires, into the realm of eternal truth and spirit. It works constantly for our happiness. Art, then, is grandly, democratically practical, because it makes great and true men.

Modern art deals pre-eminently with humanity in its most humble aspects. It teaches us that the meanest life has something in it worthy of all reverence, greater, even in its rags, than all physical nature. It not only is the molder of idealism, but it teaches the citizen to live sanely and quietly, furnishes a healthful and inspiring order of amusement, and so conserves the national life. It holds something for all conditions of men; it reveals to the rude peasant the beauty that he walks upon, unwittingly, and he listens with new ears to the songs that nature sings.

Phillips Brooks writes: "Art and poetry and music and deeper thought are helping men to the sense that this new world which science finds, where the old faiths lie captive and lamenting, is not a world all alien and terrible; but that our human lives can rise into harmony with its glorious order; that the heavens are vaster and the earth holier than what our fathers knew."

Thus science opens new purposes to art, and art records the achievements of science; there is no antagonism between the two. Indeed, there can be no great art without a great science. The men who placed the pyramids in their everlasting stations, and who handled easily masses of stone as large as a small house, wedding one to another with a nicety that baffles our artisans; Ictonos, who planned the Parthenon, and Phidias, who designed its sculpture, were masters of scientific laws that make us appear like tyros and children. Let us welcome all truth and science; science makes a great art possible for the American people. But let us remember that, as Whitman says,

> Your facts are useful, but yet they are not my dwelling,
> I but enter by them to an area of my dwelling.
>
> * * * * * * *
>
> I know I am deathless,
> I know this orbit of mine cannot be swept by a carpenter's compass.

It behooves us to remember, however, that art is, and must be inevitably, a reflection of life. The art of the landscape painter is, to define it poetically, the reflection in the river: tree and cloud form and blue sky softened and arranged in some harmonious grouping by the intelligent artist.

Art, where it deals with human nature, is no more or less than Bacon defined it, namely, "man added to nature." It seems almost idle to be talking of art when nature is making it on every side, on days like these, when bud and blossom crowd and jostle one another for the first peep of the blue sky. The fact is that we talk art too much and love it too little. Praxiteles is said to have permeated the marble with moods of his own soul. And to Ameil every landscape appeared to be a state of the soul.

When a great inspired preacher.returned from the far West, he spoke of the scenery as being wonderful, yet lacking an all-comforting human interest; it had no human history. His meaning is clear; no man has yet adequately gathered up the mighty fragments of human life and given them back to his fellows in such terms of beauty that our world could appropriate them with satisfaction to the heart and soul, as well as to the understanding. The notes of human pathos, suffering, and joy were scattered on a disordered scale, waiting for some Beethoven to arrange them into divine harmony.

Bacon, with his peculiar astuteness, has then justly defined art to be "man added to nature." This quality, then, the modern man, asks to be added to the physical side of the universe. We have no terms as yet to express it. We may call it human sympathy or feeling. Terms will not be wanting when the thing itself exists more generally. It is this precious quality which is to make our art different from the arts of Egypt and Greece and Rome, and which is to make American art grander than that of any nation in the past. The Greeks scarcely dreamed of this thing, this delineation of character — the writing of life upon the human face. What a fascinating study! It is the difference between the Venus of Milo and the Sistine Madonna — and something more, which I shall attempt to make clear. The spiritual import of the subject is to be wrought out, not necessarily by the accessories of crucifix and sackcloth, but told in the execution of the work, by the model selected, by the hand that works, and judged by the feeling inspired in the spectator, who is part of the whole plan.

> Art is the child of nature,
> Her darling child, in whom we trace
> The features of the mother's face,
> Chastened and softened and subdued
> Into a more attractive mood,
> And with a human sense inbued.

This little verse of Longfellow gives us the philosophy of art in a nutshell. The kind of art we produce depends upon the character of the human sense with which it is imbued. Men do not produce figs of thistles. We see, then, the vital relationship between character and the art product. It determines it. This is a tremendous thought; we are writing, day by day, history in poetry and bronze that shall make posterity glad that we have lived and blessed the earth, or make the men who come after us think of us as mere soulless clods, having no ideals worthy of perpetuation, no life higher than the beasts of the field.

Now, let us bring this question of art directly home. We do not belittle it by considering it in relation to the most simple talent or appreciation which we may possess. If it is sincere, that is all that is necessary. American art is the result of every degree of talent and appreciation which the country may afford.

History teaches that Greece gave something to this world beyond all its natural beauty, and that Greece did this inevitably; that she added the glory of human thought and feeling to mere physical and animal beauty. There are many who think that Greece told the whole story for all time, but those who study history in the sympathetic and searching light of today, and who live with and study their fellow-men, know that this is not so. They are conscious that America has a sublime contribution to make to the art of the world; a new chapter to write in the history of human achievement. What is it to be? We shall understand it better, perhaps, by considering first what it is not to be. It is not to be the imitation of any foreign schools, be they Greek, Florentine, or French. We are to give these schools and nations their meed of appreciation and reverence, and then to say with Michael Angelo: "I go my way alone." It is for this, I take it, that America was called into existence. Let no criticism daunt us and no past fetter us. The veriest wretch who feeds some benumbing piece of machinery in the noisy hall of a manufacturing town has something to give the world. It may be only that drop of his hopeless prison experience; but, no matter what it is, there are two rights which must be served before we can be spiritually free or actually just. The one right is to let every individual express himself; and the other right is the world's claim to that expression. Each must give his moral quota, or something is lacking in the balance. What can an artist give? Himself—no more nor less. Otherwise he is forever in debt to the world's art. He is worth in the actual balance only the moral count of that self or soul. This is the least and the most that he can contribute. If you be without character, you stand helpless before a defeated obligation.

Little did men dream, years ago, that the poor, wretched, crippled slave Epictetus had something to say of greater import than all the patricians in the land. We have not yet done with slavery; we have only advanced a plane higher in the scale of civilized living.

Shall we not find out what education in art means, if we can discover what it is in life? If I can but make you feel that each one of us has within him something so sacred, so precious, so well worth striving to develop, and to die for, if need be, that he may press forward unfalteringly, and with that high faith that belongs to the youth of a great people.

We are confronted with new problems that call upon us for independent solution. We are the heirs of all the ages, and surely we are not willing to accept tamely and supinely the opinions and achievements of the peoples who had a different light and a different social environment, and who were good and great according to their interpretation of their age.

Remember that art is not to be borrowed, or stolen, or invented. It comes only by evolution. Each flower is beautiful after its kind. The violet is not forever seeking to become a rose; nor is the rose envious of the violet. The commingling of the two would not produce anything more beautiful. Each beautiful thing after its kind, and in the natural order of development. The evolution of art and the artist works according to universal, unchangeable law. Suppose, in physical nature, a tree should take it into its head to grow downward, and so cast its tortured roots into the air — would its life be any more satisfactory? The simile is not unlike the man or the artist, or people, who are forever attempting something new, something strange. Sanity should be our watchword. The flower of a man's genius and a nation's should develop according to the law of their life principle. It expands or contracts with their soul.

> "Strength ever veiled with grace;
> The mind's anatomy implied, not shown,
> No grasping for the vague, no fruitless fires,
> But heard 'neath all the tone
> Of that far world to which the soul aspires."

It is this absolute sincerity alone which shall make for us a great art. Why was Athens great? Because she educated her world. The men were not merely trained, but they were educated — that means something more.

We must have done, then, with copying foreign models. "Miracles," as Lowell well says, "cannot be encored." We must stand on our own ground, make our own fight, and like men beat out a solution to our own problems. Without this order of independent patriotism which, as Coleridge well remarks, is the begetter of the true cosmopolitan, we can have no great order of living, and, consequently, no great order of art. What made Greek art supremely great under Pericles? Nothing so much as Leonidas and his heroic band who stood like a wall against the Persian hordes. The soul of Greece against the bulk of Persia, but the conquering soul. To the Greek the line of beauty was not only the line of grace, but especially the line of strength. Are we not still surrounded by barbarian influences? Is it not the old problem, the soul of truth against the bulk of error? Does not luxury beget indolence, and indolence depravity? Do not many of the selfish, money-making instincts of the day point to a return to the law of the jungle? Alas! who can gainsay it? And opposed to this is art, an influence which stands for the higher interpretation of life — the assertion of the soul.

Who dares to say that the soul is not still oracular, and that all revelation is of the past? Is not every stroke of genius a revelation of the divine power in man striving for expression, the voice that will not be stilled and that cannot be hushed?

We know today that the vision of beauty belongs to all mankind, and not to any clique or coterie, priest-craft, or royalty. The poorest among us has the same right to enjoyment as the richest: character alone, not rank, determines the right to enjoy. The clearest and the most ecstatic vision belongs inevitably to the pure in heart.

From the moment we open our eyes upon this world we begin to select and choose the things that are beautiful or ugly; what we select depends upon our education and the character it develops. And this is a most important matter to be considered. Man is so much the result of his environments that but few are able to escape from its thraldom and to grapple with the evil star of circumstances. Let us beautify first the home, then the school, and then the great university of the street, where all men receive their life education.

In America there is a danger of overtravel and undigested data jumbled together from the seeing of many art manifestations in many countries; this is a poor makeshift for true education. There is a time to travel and a time to stay at home and think and read, and *live.* There is much truth in the old saying of the rolling stone. It is an untraveled Shakespeare that becomes the articulate voice of England, and Dante finds a voice for ten silent centuries without traveling as far as from New York to Washington. Travel is an accident of greatness, rather than its essential.

Art is a personal matter; it is like the atmosphere all about us. We make or mar it unwittingly every day and hour. All honor to men like Innis and Gibson and Emerson, who have brought art from the chilling atmosphere of Olympus to the kindly warmth of the hearthstone. Let us not be looking forever at the stars, expecting some new planet to swim before our eyes, while we forget the beauty of the field flower at our feet. Look upon every child that comes before you as a possible Shakespeare or Beethoven or Lincoln.

"That is great which lies nearest,
Carve from this thy work of art."

Once you have entered the realm of the beautiful, you never will be able to leave it or exhaust it. There is enough work for any of our artists in any quarter of this great city for a thousand years. The trouble is with the eyes that do not see.

"The poem hangs on the berry bush,
When comes the poet's eye;
And the whole street is one masquerade,
When Shakespeare passes by."

As Minot Savage remarked not long ago: "The man that finds anything but the keenest interest in the life and atmosphere of today has exhausted, not this world, but himself." As long as there is one human face to look upon, as long as there is one human heart, with its loves and ambitions, its hidden tragedy and its secret aspiration, so long will there be art and artists, and lovers of the beautiful.

There is a heaven which, as Wordsworth says, lies about us from our infancy—the world of vision; and at its well-springs *life* renews itself; the world of the real, and that world of the ideal which comprehends the real, and of which we are so often cheated by the sterile and vapid life of the hour. "There is a heaven," as Wordsworth truly puts it, "near us from our childhood." It is not that we have too much life today, but, alas, that we have too little. It is the mission of art to enrich our lives, and to stimulate every aspiration. It is the artist's mission to reveal the worlds that are now hidden, and which are our own by every divine right. The institution teaches the beauty of holiness. Art teaches the holiness of beauty.

Notwithstanding all the wonderful beauty of this world, the conviction is thrust upon us that we are framed for something vaster and more satisfying—something more complete. We are filled with a noble discontent; with a thirst for something which knowledge does not allay, and to which religion ministers with the consolations of art, her handmaiden. As boys we sigh to be men and conquer the world, and gather in its poor honors, which are not unlike the seashells we bring home to our study, beautiful as we see them beneath the wave, but dry and colorless when once acquired and tabulated. As men we look back to the careless boyhood, lying like an oasis in the waste of the desert, and we would give all the world's trifling honors for a day of clear-eyed, untroubled boyhood. It is the undiscovered country that always fascinates us. Art stimulates the imagination and cheers us on, helping us to meet the unknown future without fear and with all faith.

Robertson once said: "What we want is not so much, not half so much, light for the intellect as dew upon the heart." And the love of art is like a roseleaf pressed against the world's scarred cheek. It is full of consolations for the desolate and the oppressed. It admits them to a world of ideal relationships where the poorest may own all that he can see with beauty's eyes. It lifts man above the desire for material possessions; it feeds his spiritual nature. There is somewhere a picture of an ideal female figure riding the tempest, and touching softly a lyre which is pressed to her side. The artist has called it "Stilling the Storm." He has attempted to depict the mission of art, which is, indeed, to still the storms of life, to dissipate doubt, and to keep in tune with the celestial harmonies. The shadow of doubt cannot be dispersed always by intellectual effort, no matter how searching and exhaustive. But it is rarely that one appeals to the ministration of art without receiving divine consolations. Truly has Robertson understood it; it is dew laid upon the heart.

As to character, the lamp of independent light, of isolation, if need be, must be kept steadily burning on the altar of sacrifice, if character is to grow. We cannot adequately measure in our own day success or failure; it must be often as Lowell has written:

Truth forever on the scaffold,
Wrong forever on the throne,
But that scaffold sways the future,
And behind the dim unknown
Standeth God within the shadow,
Keeping watch above His own.

We must not measure success by any tangible accomplishment; this, to be sure, is the world's standard of success; but the poets of today find a new and sublimer key in which to chant their epic praise. To Keats' finely tuned ear the sweetest ditties were those of no tone; to Browning, the unaccomplished,

All that the world's coarse thumb
And finger fail to plumb,

was worthy of the highest praise. Life is forever greater than any manifestation or reflection of it in art; there is only one thing that can make us great, and that is living greatly. Noble natures, as Schiller aptly puts it, "pay by what they are, and not by what they do." So I would say to you, many who are gathered here today, and who must swell the ranks of the great army of appreciation, that loving sympathy is more than mere tangible accomplishment, and that living well is the first and greatest consideration. "Unto each man his handicraft, unto each his crown, that just Fate gives."

May I then appeal today for the responsibility laid upon each one of us in the creating or appreciating of beauty? You cannot escape this responsibility by claiming lack of inherited talent or culture. Science teaches us that man is what he thinks. A man may rise upon the stepping-stones of his ancestral self to higher things, notwithstanding Dr. Holmes to the contrary, and bravely support the weak steps of a new and untried thought.

I should be glad if I could dispel the idea that art means luxury or luxurious surroundings; this is often the abuse of the best, which is the worst phase of art. Art thrives greatly only amid manly and simple surroundings. Perfervid living and luxury are the sure forerunners of decadence. Art teaches us to appreciate the beauty of the lowly; the "flower in the crannied wall;" to consider the lilies. The greatest painter of this century, Millet, lived a homely life among the peasants of Barbizon. The accident of wealth or poverty has little to do with it; sincerity of purpose is the only touchstone.

"Beauty is truth, truth is beauty."

There are many who say: "We know nothing about art." This implies that they know little about life, that is, in its rounded sense. Then let us advise such to use the eyes God has given them, to look about them, to look at the first mother and child they meet on the daily round, and then at a photograph of the Dresden Madonna, and see how art interprets that first and tender relationship. Let me ask them to look with sympathy at the first woman's face upturned in the ecstasy of power, and then at the face of the Madonna or the "Assumption," and see how Titian interprets the relation of man to God.

Many of us, born in cities, learn to love beautiful nature thru beautiful pictures, and to understand the beauty of the human form only thru the sculptor's loving appreciation of it. Do not consider too curiously, or trouble yourselves with the cults or isms of art, but use your common sense, and assume bravely your responsibility in this matter. If you find in the Dresden Madonna something more than paint and bristles, accept art as an interpreter of all true religion. The fault is in ourselves, and not in our stars, if we are not receiving the consolations and inspirations of art. I would advise everyone present to live constantly in the light of some great masterpiece — let it be but a small photograph of the Dresden Madonna or the "Assumption"—and try its effect upon his life. You will find in this companionship something greater than all nature affords, namely, man's interpretation of the universal in the terms of beauty.

Art is a great safeguard in these days, when the physical sciences threaten to sweep away all traces of man's relationship to the divine. It establishes the fact that every race in every clime has cherished some ideal of immortality and a protecting God. Colonel Clarke, of the Bureau of Education, shows us that the crude totem pole of the Alaskan savage, representing at its summit a frog escaping from the mouth of a crudely carved face, was meant to convey the idea of the soul's escape from the body, and which the Greek embodied so beautifully in his larger culture in his sculptures of Psyche and the butterfly, and love and Psyche.

The Greek believed that art works steadily to perfection, and that, therefore, it makes a man fit to become the friend of God, and so establishes his immortality. The love of art inculcates an appreciation of obedience. No man can create a work of art without being, in a degree, a master himself; nor can anyone truly appreciate it without some order of self-mastery. Art tends to check our unbridled desires. It works for temperance and balance, and so accomplishes silently the freedom of the spirit. Keats truly says of it:

Thou silent form dost tease us out of thought
As doth eternity.

But there is another way of looking at this subject, which I may call the aspect of the humanitarian, and that is this: that we can claim to be neither free nor just until we have given every man, woman, and child in the world the right to express the beauty that is within them, and to enjoy the loveliness of the world that is without them.

Some interesting experiments have been made in East London and in the slums of New York and Boston, in the way of presenting to the people their fine works of art hung upon the walls of church and hall, and the result for good has been beyond all expectation. The expressions of the poor and miserable outcasts have made us believe truly that man does not live by bread alone, but that, to uplift him, we must furnish food for the spiritual side of his nature, as well as the purely physical. Let us call upon everyone present to encourage and carry forward this work of regeneration. Is it not the truest political economy to do so? By crowding in the good, as Drummond says, you leave no place for evil thought or deed.

Then, again, art works for American unity, because it wars constantly with the desire of any one section unduly to exalt itself, by making our forefathers and present heroes national examples of virtue and courage. It tends to knit more closely together the hearts of all true Americans. Homer made the Greek people great, in spite of their defects, by keeping before their minds the mighty Achilles. And an indolent race became heroic in listening to the story of a character that existed mainly in the mind of the artist poet.

I pray you, then, keep a corner in your study for some statuette of heroic manhood, or of appealing womanhood. I pray you, keep a place in the quiet of your own thought for growth along the lines of beauty. Do not be ashamed of the ideals you have cherished in your ingenious youth; stand by them thru life, and believe that art will help you to do so, and that character is the resultant of this order of devotion. You will find that the most brutal natures uncover in the presence of the man or woman who carries the love of beauty in the face. We must have a platform and a purpose, not borrow or beg our arts. No circumstance can deter the man or woman of character and resolution.

"Thou hast but to resolve, and lo! God's whole
Great universe shall fortify thy soul."

One of the saddest sights in life is to see a man or a nation drifting away from purpose and at the mercy of the wind and tide; a helpless derelict on the great ocean of life. The universe is against such a one.

"Beneath this starry arch
Nought resteth or is still,
But all things hold their march
As if by one great will."

The Christian world, as someone has said, has added the minor notes to the gamut of poesy and art. This charge certainly is true.

"Our sweetest songs are those which tell of saddest thought."

But Steadman, the poet, remarks with feeling that it is better to suffer than to lose the power of suffering. While a wide field has been lost to us where the pagan reveled in pure sensuous enjoyment, a vastly more interesting country has been discovered; it is the writing of character upon the human face that arrests our attention and claims the quick sympathy of the modern world. The ancient world concerned itself but little with this. Disease and death and old age and pain were thrust aside and quickly forgotten. We have Christianity to thank largely for the development of this sympathetic relationship of man to his fellows, with the thousand and one rainbow tints that overhang this relationship. Life has taken on a tremendous seriousness, and we have lost the naïve pagan forgetfulness of responsibility. The world is rounding out its character; working toward the millennium. Do I make the function of art in education clear?

Mrs. Ward, in her last book, *Helbeck of Bannisdale*, says: "The transformation is enormous! The mass of men who read and think and lead straight lives today are on the whole conscious of a dignity in range their fathers never knew. The spiritual stature of civilized man has risen — like his physical stature. We walk today a nobler earth. We come — not as outcasts, but as sons and freemen into the house of God. But all the secrets and formulæ of a new mystical union have to be worked out." And art is to help us in these processes.

Need one call upon you at this crucial time to be faithful to your country to cherish the patriotic idea in art? The names of Hobson, Dewey, and Bagley have made the present heroic, and silence the mutterings of those ancient mariners who would make us believe that all greatness lay in the past. The world has a new record of moral courage, and America has suddenly taken a foremost place among the nations. A tide-water mark has been cut upon the vast shores of human endeavor.

If, indeed, character is destiny, we must predict for this people an evolution so magnificent that one trembles in picturing it. Love well your country. Without patriotism there can be no more heroic order of living; no high ideals, and no great art. A feeble, flaccid people can produce no enduring arts, and soon becomes the slave of Greek or Roman. Emerson truly wrote:

What avail the plow or sail,
Or land or life, if freedom fail?

Witness the Greek, Roman, and Florentine civilization; remember that Pericles, Cæsar, and Dante were soldiers. Someone laments that the cannon must speak in the teacher's place. Are there not times in the history of a people when the cannon is the best and most effective teacher ? You step upon the stage at a critical period in the history of the world. Only by loving this land can you make it great or produce great art.

Let us believe in the arts of peace, but not when they are purchased at the expense of freedom. We all love peace, but not at the price of character and honor. Life on a high plane is worth all peaceful arts on a low plane. How dearly our freedom has been bought ! The value of the lives that paid for it cannot be computed here or now. It is our precious heritage, for is not humanity, with all its hopes and with all its fears, hanging upon its destiny ?

DEPARTMENT OF MUSIC EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—FRIDAY, JULY 8, 1898

The department met at 3 P. M. in the Gunton Temple Memorial Church.

E. W. Pearson, supervisor of music, Philadelphia, Pa., read a paper on "Fads in Public-School Music."

Miss Mari Ruef Hofer, Chicago, Ill., read a paper on "What Is Music and How can We Help Children to Become Musical?"

C. H. Congdon, supervisor of music, St. Paul, Minn., spoke on "Individual Singing."

The president appointed as nominating committee:

F. E. Howard, Bridgeport, Conn.
Miss Linn Marie Hawn, East Orange, N. J.
Miss S. Lillian Byington, Moline, Ill.

SECOND SESSION.—TUESDAY, JULY 12

The session was opened with a song by classes from the city schools of Washington, conducted by Miss Anna E. Scammel, supervisor of music.

A. E. Winship, editor of *Journal of Education*, Boston, Mass., gave an address on "School Music in Character-Making."

Mrs. Carrie B. Adams, Terre Haute, Ind., read a paper on "The Next Step—What shall It Be?"

The paper was discussed by Miss Sarah L. Arnold, supervisor of primary schools, Boston, Mass.

The report of the Committee on School Songs was given by P. C. Hayden, supervisor of music, Quincy, Ill.

The chorus singing by the children, under the direction of Miss Pearson, was a most interesting feature of the meeting. They sang with a clearness and purity of tone, and an exquisite expression, seldom heard from pupils of any age.

The piano solos by Mr. John Porter, and the vocal solos by Mrs. Nellie Wilson Shir-Cliff and Mr. George B. Cooper, were greatly enjoyed.

A vote of thanks was tendered Miss Scammel and Miss Stetson for the perfection of arrangements and beautiful souvenir programs of the meeting.

The nominating committee reported as follows:

For *President*— Mr. P. C. Hayden, Quincy, Ill.
For *Vice-President*— Miss Mary A. Grandy, Springfield, Mass.
For *Secretary*— Miss Lucy Robinson, Wheeling, W. Va.

The report was accepted, and they were unanimously elected.

The meeting adjourned at 5:30 P. M.

S. LILLIAN BYINGTON,
Secretary.

PAPERS AND DISCUSSIONS

WHAT IS MUSIC, AND HOW CAN WE HELP CHILDREN TO BECOME MUSICAL?

BY MISS MARI RUEF HOFER, CHICAGO, ILL.

Whether the study of music as an art will ever obtain in the public schools, or whether the schools are the place for artistic cultivation, it is not the object of this paper to discuss. Has not much of the objection to music in the schools, and the difficulty of teaching it, arisen from a misunderstanding of its nature and place in the work, rather than in the impossibility of doing it artistic justice in the schoolroom?

The work of the modern psychologist has done so much toward justifying art and relating it to the whole of the educational scheme that the music teacher need no longer make empirical and dogmatic statements to convince the unmusical of its reason for being.

Not the least battle fought by the new education has been that against the intellectualization of art in schools, and thru this the stunting and perverting of its first uses in primary education. But in the great reversal of opinion which has taken place in these matters old truths which have long lain buried beneath the educational structure have at last been thrown to the surface.

With the better understanding of the methods and principles of education, thru the deeper study of the child and its development, the emotive power, so long at a discount with the educator, now bids fair to become the chief stone of the corner.

Thus the pedagog now stands as middleman and high priest, the minister at the shrine of incipient genius. In the light of the new truth we are discovering that the so-called "divine spark" is the inheritance of all, that artists are not only born, but that we teachers can readily help make them by properly understanding the material, both human and theoretical, with which we deal; that many a gem of genius "of purest ray serene" lies hidden under a heap of mere rubbish of accumulated ignorance; that this spark, tho feebly glimmering in some, in contrast with the brilliant sparkling of others, and tho never found alike in two individuals, may often be fanned into a divine flame, and man reclaimed from the slavery of imitation to the dignity of creator and artist thru right education.

In the art of music, of whose mission the musician has always been so certainly and luminously sure, we are particularly grateful for the reinstatement of the creative principle as the basis of development. We feel to thank the psychologist for stealing our thunder, inasmuch as its accompanying lightning flash has revealed to us a wider vision of the usefulness of our art, and awakened us to the fact that the musician and the music teacher have a great work to do. Not that the rational educator and parent will forthwith desire to make Mozarts and Beethovens of all the children, but that we will strive to give music its right use and proper place and part in their education.

In the treatment of "What is music?" it might be well to begin by saying that it is not comprehended in notation, nor should its first study consist in the learning of notes. Even the book company is beginning to recognize that it is not for the special benefit of exploiting some elaborated human system of teaching, but that it must offer us an advance in musical culture as well.

In order to approach the question of "What is music?" we need to go far back of that which at the present time it stands for. As far as human expression is concerned, music is our first art. Song is as old as humanity. The music of today is but an elaboration of the primitive emotive utterances of the race thousands of years ago. The poet tells us that:

Since ever the world was fashioned,
  Water, and air, and sod,
A music of divers meaning
  Has flowed from the hand of God.
In valley, and gorge, and upland,
  On stormy mountain height,
He makes Him a harp of the forest,
  He sweeps the chords with might.
He puts forth His hand to the ocean,
  He speaks, and the waters flow,
Now in a chorus of thunder,
  Now in cadence low.
He touches the waving flower-bells,
  He plays on the woodland streams,
A tender song, like a mother
  Sings to her child in dreams.
But the music divinest and dearest,
  Since ever the years began,
Is the manifold passionate music
  He draws from the heart of man.

Where nature leaves off, there man begins. As a link between the natural and the divine man stands a self-conscious and interpretative being, and to the earliest beginnings of these interpretations we trace the birth of art. We are told how, little by little, as the external and visible signs of the world about him left their clear images in his mind, "nature plus human imaginings, mixed in the alchemy of men's souls, became music."

When primitive man was thru with the hunt or war with his enemies, in his hours of ease he would reflect upon his experiences of either victory or defeat, or the excitement of the chase, and then re-enact these incidents for his own pleasure and the pleasure of his friends. Primitive man, when possessed by an idea, moved by feeling — an emotion — sprang up and danced and sang it out. Thus were born dramatic art, music, and dancing, as represented in the choral dance.

As living and loving and warring grew more complex, so also grew the moods and content of emotional experience. That which began as a rude cry and exclamation gradually assumed form and order. As man's consciousness and appreciation of the world about him increased, his vision expanded, and he gained the power of abstracting and reproducing at will his impressions.

In this simple story we find our whole problem in a nutshell — the statement of the creative principle in man, a psychology of art, and a philosophy of teaching identical with the best methods of today. What the child of the race did a thousand years ago is the process of development of the child of today.

It was not until the Christian era that our present color and music were born, which are the immediate material with which we deal. With the new message to mankind love for your brother, new thought and feeling arose and brought a richer emotional experience than had been known before. With a new content for life came the new content for art. All the old things were remodeled after the new idea. Barbaric strains were transformed into the Christian hymn.

Then we come to the time when music was recorded and perpetuated in language form. The scholar, gathering up the thread of the people's thought, carried it to the monastery, where he elaborated and perfected what has since become a scientific form of music.

Here it is well to note a point. In elaborating the form of music, content was lost. The mind engaged in mathematical ordering and calculation had not time to experience or the disposition to feel. Music became formal and conventionalized. Thus we might say that in music-making music-creating was lost. When the relation of music to life ceased, the vital element was lost. Have we not here the key to a double situation which throws light at once upon the condition of art as well as the need of returning to its simple, natural beginnings with children? Has not one of our great difficulties in teaching been the elaboration of the technical side of music at the expense of the natural and emotional approach which leads so directly to the cultivation of its ideals?

Previous to the period of its formulation music figured as a natural language and expression of the people. This music we have preserved to us in the form of the folk song, which, vitalized by the living touch of daily experience, has given us some of the best themes of our musical literature, and forms the basis of the romantic school, in contrast with the classical of pure form, which again finds ascendency in the music development of today.

With the experience of all the past and present gathered up in our music, it is history, biography, poetry, and philosophy.

How best to bring the great musical inheritance at our command to the children, how to help children into early musical appreciation, how to open the door thru simple songs and elementary training, is a subject worthy of the study of the best musicians and teachers that we have, and one destined to influence most strongly the quality of the art as well as of the artists of the future.

The easy lending of tone to the expression of idea makes of music a natural picture language. Aside from pure music writing, the picturing of ideas thru tone and rhythm images, the attempt to tell stories, even to express definite ideas, thru combinations of musical sounds, has been common from the earliest period. To the child, the word, its meaning, and the thing itself are identical. In the teaching of singing the nearer we get to natural primitive expression, the more we get the tone of pure feeling, such as ejaculation of surprise, fear, anger, sorrow. Utter a succession of tones as exclamation, vary the pitch, and you have the essentials of a song. Yet the farther we get away from personal experience into the reproducing of ideas outside ourselves, the more we enter into the imaginative and descriptive, and here we rise to the intellectual higher forms of melody and rhythm which complement the varying ideas expressed in the picture. As with the savage, with very young children the interpretation of a song rests upon vital experiences as the basis of the mental image which makes it an art production instead of mere imitative chatter. We can get tone, color, and proper interpretation only from the emotional background or meaning of the song. Why not teach a song as intelligently as a literature lesson? Why not sing a song as intelligently as we would read a poem?

The recipe for interpretative singing, with children as with artists, is vital and intelligent singing. Why we have made such difficult work of interpreting, when music is only intelligence expressing itself thru a tone channel instead of a verbal one, it is difficult to say. Every master in music speaks to us directly, without circumlocution, and we intuitionally and naturally understand him and respond to his moods. It is only when we approach him from the standpoint of technical difficulties that our courage fails and we fall into confusion and uncertainty.

A beautiful song and its correct interpretation embody all the elements of music teaching, even in the most advanced stages of study. I would make the statement now — and this may arouse some discussion later — that I believe that all musical difficulties may be reached and solved thru the needs of interpretation, and that without a loss of interest to the child or a necessity of much musical drudgery. We are learning that the divorcement of the study of music from expression sets the mind adrift like a traveler trying to accomplish the impossible feat of traveling upon two roads at the same time. As a consequence the vital energy is spent in vibrating between the two interests instead of reaching the final goal of interpretation thru the solution of the musical difficulty.

In helping children to become musical, the work is poorly begun if the teacher who stands before her class insists upon breaking every law of the musical decalog by her very presence. With a voice unmusical and unsympathetic, unrhythmic in body and in mind, she is apt to destroy the first great, and, I will say, the most important, music lesson which can be brought to the child, that of artistic example and presentation. I have in mind a teacher who receives several thousand dollars a year for making her children wholly unrhythmical and unmusical. Bad habits and bad taste emphasized in these early years become fixed and almost ineradicable faults. I would then place at the head of our work artistic presentation. In this should be comprehended all the details of good singing on the part of the teacher—good breathing, well-placed and modulated voice, rhythmic and musical singing.

The next consideration, of equal importance, is the song itself; we have always had good ones, and we are continually increasing their number. By a good song I do not mean the merely pretty and fanciful creation, with which we are being deluged with the increasing interest in music for children. Even with very little children the song chosen should be worth teaching and singing.

In the choice of material, first of all we must have a story—a something to tell. Fortunately for us, the song with a moral is a thing of the past. A good poem from the child's standpoint, as well as a literary one, is necessary to our work—one of description or conversation; an episode or dramatic plot, will serve our purpose. In a song the text is of the first importance, and the music should complement and lend itself to the development of its moods.

After establishing its general characteristics and giving it a reason for being, we can next take up its musical treatment. Is it a melody song, a rhythm or harmony song? Is tone or movement the leading feature, or does its harmony fascinate the ear with many voices, or complementary story-telling? The limitations of the class quickly decide the point of emphasis. If the voices are bad, we need sweet tones and pure melody; if the children are passive, we need the activity and life of a rhythmical song. If their ears are defective, we can cultivate their listening capacities to good effect. The story keeps the interest alive, and the treatment of the musical element offers opportunities for a good music lesson. In interpreting a song it is well to remember that its idea is cause, and the picture obtained is effect. Sometimes our pictures tell tales out of school.

You cannot expect a child to express what he does not feel or understand. Develop your song and gain your results as far as possible thru the interpretation of its idea.

By following this method, the imagery of pure form and pure tone, and the feeling for rhythm, the appreciation of a chord, the sense of balance in the borrowing and the lending of a phrase, in the building of a climax, soon become musical first principles, which are easily accomplished in ordinary school work. In learning either to sing or play, thru repeated sensation there is gradually established a motor, auditory, visual, or tactile imagery, and when this is accomplished we may truly say that the word has become flesh and right doing unconscious habit.

In teaching music from a musical standpoint it is necessary to keep in mind the musical side of development and to bend all other issues to this end. One of the evils of past music teaching was the tendency to force the abstractions of music—its symbolism and technique—upon young children, instead of its vital and emotive uses. In connection with this was the encouragement of the visual over the auditory appreciation of music, the eye over the ear. To get a beautiful tone we must hear tone, feel tone, think tone, and finally, with a perfect mental concept, will come the understanding and the power to reproduce. Also the trying to finish our work too much from the so-called artistic standpoint, and the desire to obtain musical effects, rob the child of much of the broadening nature experience which song life might otherwise bring to him.

Following the order of natural development, the study of music lends itself naturally to the culture-epoch periods of child development. These are most interesting to trace, and with careful study quite possible to meet with related song material.

In the kindergarten we have represented the primitive emotive period, where song is spontaneous expression, a part of real life vitally lived out. This phase extends itself into the next higher, the imaginative or representative period, where nature appreciation begins, and the life of bird and bee and tree and flower is dramatically reinterpreted by the child. Next follow the occupations of man in the pastoral and industrial experiences; myth and fairy tales; the arithmetical, where the teaching of the intricacies of musical notation best finds its place; then follow the legendary, historical, and literary, represented in folk songs, ballads, and the larger musical forms of opera and oratorio. All these phases are represented in a most valuable and beautiful song literature at our command. Of the making of books there is no end, and, as someone has said, we may have to resort to a cremation before we can sift out that which is worthy and desirable.

In our advanced civilization we have gone somewhat astray in the writing of pretty tunes for children, instead of giving them musical ideas to appreciate. How to provide the child with the largest experience, the stuff out of which music can be made, should be our deepest concern. In the two-step atmosphere of the nineteenth century it is a little difficult to give him impressions deep and sound, which will lead him finally to grasp music in its larger meaning. We cannot produce the musician or the artist simply by listening to pretty tunes or tones, but by inspiring him with noble ideas and sentiments, which, if he becomes a musician, will make of his music a life work and a ministry to the human race.

Now that the art of music is corroborated in the science of teaching we need no longer apologize for our work under cover of an arithmetic lesson. Let the law of its beauty sink deep into the children's souls. Flood them occasionally with harmony, as you would your lawn when the turf gets dry. Let the music speak while the teacher keeps silent. It conveys more thru a few moments' simple hearing than volumes of explanation on our part. Subordinate the theory of music to its performance. Always present difficulties, not as abstractions, but as rewards of merit and sugar plums. Finally when, thru the ideal conditions presented, we not only get a few facts about music into the child's mind, but arouse his will and the true assertion of himself in song, we gain not only beautiful singing, but the true individuality of the child. We arouse the artist's power, and we contribute to the world's work a vital, active factor. If the work of the teacher of this age is well and intelligently done, the making of men and women as well as artists and interpreters should follow as a natural result.

Above all it is necessary to avoid smartness and mere cleverness in this work which lies so close to the ethical heart of the child. The child has nothing to do with the superficialities of art. He has everything to do with its fundamental values — the actual root experiences from which its flower and fruit will grow. We naturally shun the person who knows how all the wires are pulled and pulls them. I have seen a very clever teacher "sketch in a song," "touch up the ethics," finish it and tack down the technical corners in the most approved fashion, whilst the stupid children gazed wonderingly and the smart ones lent themselves to her rapid methods, perfectly conscious of the show that was being carried on with them.

In these facile days we are learning to honor the perfectly plain, honest man who indulges in "no fancy notions," and, tho he be a little slow, is simple and sincere at heart, and produces earnest and unveneered results in art. Sincere growth is slow, nor can we hasten the process by mere surface agitation. As music teachers we have a mission toward art besides earning our living and covering ourselves with glory in its performance. Are we teachers by the grace of God, or mere menials in the courts of the Most High in the matter of serving art? The making of artists is the work of our age; let us see to it that we do not misinterpret the divine message intrusted to our care.

INDIVIDUAL SINGING

BY C. H. CONGDON, SUPERVISOR OF MUSIC, ST. PAUL, MINN.

Many music teachers are of the opinion that during the first three years of school life, beginning with the kindergarten, the music period should be given up almost entirely to the singing of good, wholesome songs by rote.

To be sure, it is possible to teach six-year-old children to read easy music; but does it pay to devote the greater portion of the music period to this work, when we consider the age of the children and the limitations of the school program ?

Children gain most of their knowledge thru the perceptive faculties, and not by reasoning or reflection. They absorb the strongest influences that surround them, and, by their wonderful power of imitation, grasp the things that are most vividly presented. Their power of analysis is comparatively weak, and their capacity for serious study and methodical effort extremely limited.

It is unwise, therefore, to reverse the order of nature by attempting to force these young minds to grasp a subject so abstruse as the technical study of music.

A child's first conceptions are of wholes and not of parts. He knows a flower long before he can learn to analyze it, and likewise he can remember a complete melody much more easily than he can grasp its constructive elements. I believe, therefore, that it is not best to attempt the study of sight-singing to any great extent below the third grade. This is the time when children should acquire the language of music as they have learned their mother-tongue, for the love of song implanted in the human heart at this early age will live and grow to bless the coming years.

The ability to sing comes to children usually about three years after they have learned to talk.

It would naturally follow, therefore, that, if their first efforts in learning to read are made at the age of six, they should not begin the serious study of sight-singing much before they are nine years old. By this time they will have acquired, thru their song training, correct conceptions of melody and rhythm, and a taste for singing that will be a great incentive to all future efforts in the line of technical study. The greater interest they would then take in the new work would more than compensate for the loss of time.

Many argue that young children delight in singing exercises by syllable, and, therefore, devote most of their singing period to such practice. Of course, children take great pleasure in doing anything for a successful, enthusiastic teacher; they enjoy cleaning blackboards and dusting erasers, and enter into such work with great zest, because they love the teacher, and her wonderful influence will impel them to vigorous effort along almost any line of action. This, however, is no argument in favor of mechanical drill work being made the chief aim of public-school music.

I believe that song singing should continue thruout all the grades and into the high school, whether the children are able to read music or not. When the time comes, however, for the introduction of sight-singing, the two lines of work should be held distinctively apart until the proper foundation has been laid for the latter. It is to be hoped, of course, that these two lines will eventually meet, and that the children will be able by the time they have reached the fifth grade to read the music of their songs.

It will be inferred from the title of this paper that a considerable amount of technical advice in the matter of methods will be forthcoming. In order that the idea may not obtain that I belong to the school of mechanical teaching, I beg leave to state, in a general way, my views of music education.

The power to imitate is one of the most valuable faculties with which the human mind is endowed. This faculty is brightest during childhood, and without it the young mind could not develop. Children learn songs at first by imitation, which is, of course, the natural way.

The process of singing by note is decidedly unnatural, and the ability to sing at sight is difficult to acquire, but it is a means to a greater end, and is therefore a part of one's education. Because children can imitate so readily whatever they hear, the process of recalling elementary concepts is exceedingly difficult.

Calling words is a small part of the mental process of reading, and yet, no reading could be done without the ability to call words. The greatest value of music in the schools lies in its salutary effect upon the children —cultivating their emotions and influencing them for good. The best results are reached, however, when the children are taught to read music intelligently.

Without a correct conception of the relative pitch of sounds, sight-singing is out of the question, and ear-singing must necessarily predominate. Many teachers think their work is satisfactory because a few pupils with strong voices lead, and the rest follow. An examination often reveals the fact that a great majority of children sing by ear, and would get along about as well if they had nothing to look at but the words. When concert singing is done exclusively, only the natural leaders acquire the ability to read.

The natural leaders are not always the natural singers, for oftentimes the intellect develops more rapidly than the emotions; and while the natural leaders readily obtain mechanical results, the quality of voice and the expression are often sadly neglected. On the other hand, many natural singers have beautiful voices and a strong appreciation of the emotional side of music, but overlook the mental effort necessary to interpret the printed page. They depend entirely upon their neighbors for the melody.

Experience shows that it is possible to reach the individual in the matter of tone relation as well as in number relation. We should be on our guard, however, against falling into mechanical habits, and remember at all times that the development of tone relation is only a necessary means to a very desirable end, viz.: the intelligent interpretation of the printed page of music and the proper rendition of the school song.

The first necessary condition for individual singing is perfect discipline. Each pupil should stand ready to respond instantly to the call of the teacher. He should be willing at least to *try* to sound the keynote, and to do as much more as possible. At first the pupils will laugh at slight mistakes, but in a short time this will wear away, and individual recitations in music will be regarded as a part of the daily work.

The timid pupil should not be discouraged at the outset with difficult problems. Give him something that he can do, and he will be ready for the next step. The great value of this work is not so much in the actual drill, as in its reflex influence upon pupils. It is an incitement to individual effort, which is the true secret of acquired ability.

Thru the practice of writing music by dictation we have found a speedy way of reaching the individual. The value of written work as an aid to the memory should not be overlooked. Children will acquire a more definite knowledge of the staff notation by the practice of copying music and writing it by dictation. Scales, signatures, intervals, etc., will thus become indelibly fixed in the mind. The songs can be preserved for future use, and the work will thus serve a twofold purpose.

A plan must now be devised for individual tone drill that will not exhaust the time at our command, and thus leave no room for the study of songs.

As far as possible, teachers should make the following observations and keep a careful record of them:

1. To what extent is the coexistence of the number sense and the tone sense found in children?

2. Do pupils who think tones readily catch melodies with equal facility, and *vice versa?*

3. After the pitch is sounded, how many pupils can start a familiar tune without further aid or suggestion?

4. Take a list of pupils who are prompt and alert during the physical exercises, and see whether or not this list coincides with any of the above classifications.

The work in sight-singing should be conducted on the basis of individual intelligence. It is not intended to dispense with songs until every individual pupil has mastered tone relation; on the contrary, song singing should be continued in all grades, notwithstanding the fact that the majority of children sing by ear. A line must be drawn, however, between the two ways of singing, and a certain amount of time devoted to each.

We must not deceive ourselves any longer by taking for granted that a knowledge of the constructive elements of music will come incidentally thru song practice. This work should receive the same careful attention that is now given to the number work; every child should learn to think tones independently, and, in order to accomplish this, individual effort should be required.

The following classification is suggested for carrying out the work of individual singing:

1. Those who can sing all the sounds of the scale in any order.
2. Those who can think a few tones, but have not mastered them all.
3. Those who sing by ear only.
4. The monotones.

Drill work is very misleading as to the actual results. Many do not stop to consider that in concert singing a large percentage of the children sing by ear, even when they are practicing sight-singing exercises. In my opinion it is even much better that the children acquire a knowledge of tone relation by individual effort, and that the concert work be devoted almost entirely to the study of beautiful songs, adapted, of course, to the child as well as to the grade. The impulse of a song thus learned will carry the children to the next effort with greater interest, and they will always be rewarded for their efforts.

I would suggest, therefore, that, on the basis of a fifteen-minute daily lesson, about five minutes each day be devoted to individual singing, and that purely intellectual effort be required. An individual recitation always has a reflex influence. It is not the amount of drill the pupil gets while he is reciting, but the fact that he has made an individual effort brings him to a personal contemplation of the relative pitch of sounds. Once the child knows that he is expected to think tones as he thinks numbers, and to know the scale as he knows the multiplication table, he will grapple the problem outside of the singing, master it, and apply the knowledge thus gained when the class is struggling with the difficulties of a new song.

Let me close, then, by saying that in my opinion the so-called drill work should be confined principally to individual recitations; that every child above the third grade who can sing the scale shall be required to master the elementary principles of tone relation; that the failure to accomplish this shows laxity on the part of the child or incompetence on the part of the teacher; and that at least two-thirds of the singing period in school shall be devoted to the study of beautiful songs adapted to child life. The salutary influence of song will thus predominate in the schoolroom, and the children will always look forward to the singing lesson with delightful anticipation, and the drudgery and mechanics of public-school music will be relegated to their proper place.

SCHOOL MUSIC IN CHARACTER-MAKING

BY DR. A. E. WINSHIP, EDITOR "JOURNAL OF EDUCATION," BOSTON, MASS.

Music rises thru rhythm and melody to harmony and symphony. School music brings the populace up to the enjoyment of all the comfort, peace, and joy of music, in so far as music has a common interest for mankind. It also brings music as an art into the everyday life of the world by making it the habitual companion, in their impressionable years, of those who are to be the Americans of the future.

At large expense we are beginning to beautify schoolrooms with reproductions of works of art, reprints of the masterpieces. Too much cannot be said of the benefit to be derived from placing these where children can see them day by day; but even this is hardly to be compared with the influence of the daily singing of historic songs, the weaving of selections from masterpieces into the hearts and voices of children, to be taken by them into after-life.

The problems are how to get the most of music into school, and the most out of the music of the school. Let us have music in every school in America. It is almost as absurd to have a school without music as to have a schoolroom without sunlight. When music is in the school, it should be so taught as to be a factor in character-making. Sunlight in the schoolroom will not insure health without proper ventilation and appropriate exercise; indeed, it can ruin the eyes if it is directly faced. So music will not make character simply by admitting it to the schoolroom.

The school has its influence upon the child individually and as a member of the community. The school helps the individual to intellectual power, practical force, and personal character. The community influence of the school is focused for good citizenship, for worthy membership in society, for the leavening of the universal character of the people. The culmination of both is in character.

Music is of service to a greater number of persons than any other art. More appreciate it and execute it; more are influenced by it and use it for the pleasure and good of others. The poorest get from it comfort and enjoyment, and the rich joy and peace. The laborer at his toil, the millionaire at his dinner, the servant and the servantless housewife in the kitchen, and the society queen in the drawing-room, all find music their tonic. Music rests the body, balances the mind, and pacifies the soul. It is said that one cannot be hypnotized when he is singing. The violently insane do not sing. An angry man cools off if he begins to sing. There are no angles in a song. The tendency of music is to make one beautiful. If there are discords in the life of musical people, it is not because of the music, but in spite of it.

Music may be taught in school so as to be a mere glossing of the life, or it may reach to the fountains of character. No art can be spread out so thin, as none can run so deep.

A bird that is ill will not sing. Music represents health of body and of mind, of disposition and spirit. It represents, also, faith and love, joy and peace.

The common school is especially a place for teaching singing, for giving the child the power to get the most out of music, that he may give the world the most thru music. It is something to sing, but singing of itself is not enough. One must know how to sing well. When Melba, the queen of entertainers, with a voice of culture as well as of sweetness and force, began her training with Marchesi, she would spend twenty-three hours and forty-five minutes of exquisite care of body, mind, and spirit, in order that she might be in the best possible condition for a lesson of fifteen minutes. If a woman of her genius and power needed the most skillful training at the hands of one of the world's most gifted teachers, what shall be said of those who think that it is all-sufficient to have a school sing one hymn or song each morning?

School music should be taught by a thoroly good system, and by one competent to train the voice.

The school is no more expected to make soloists than to make horseshoers or milliners; but as the school gives the training and education so that one can prepare advantageously for any life work, so it must give that preparation for specializing which shall discover to the child his talent for music. It ought to be expected of every graduate of a public school that he shall he able to do as well with the talent he has in music as he does with that which he he has for letter writing.

There is a tradition that most musicians have but three or four pet songs or "pieces of music" that they can render at any time, and that they can play or sing only when they are in practice. This may be the professional's standard, but it is not the standard of the people in other things. What would be thought of a school that trained the pupils to perform but three sample examples, and these only when they were in practice, or to read a selection of descriptive, didactic, oratorical, and poetic character? The comparison is not adequate, but it is suggestive. The public school ought to do away with much that seems to the people nonsensical in the limited power of trained musicians.

While children should be trained to get out of some masterpiece all that is in it, they should also be taught to get out of every masterpiece in music somewhat of its power as readily as they do out of *Paradise Lost* or the *Merchant of Venice.*

Many of the choice bits of music are as capable of universal appreciation as the most popular lines of Burns or Byron. Music has hallowed the humblest virtues and the homeliest conditions. Who that ever heard Patti throw the halo of her genius over "Coming through the Rye," or Annie Louise Cary breathe the inspiration of her soul into "Down Upon the Suwannee River," can ever forget the power of the human voice over each individual in a vast audience?

One evening when Jenny Lind was at the height of her power, and the largest auditorium in New York city was packed to the limit, Daniel Webster occupied the box of honor. As she was swaying the audience with one of her star selections, for the rendering of which she was trained to the limit of her ability, Mr. Webster said to a companion: "Why doesn't she sing some ballad of her girlhood days?" The gentleman retired. and, as the great singer left the stage amid a deafening applause, he told her of the remark of the great orator. As quick as thought she returned for her encore and sang in her native tongue one of the sweet ballads of her childhood; and as the last note died upon that breathless throng, she turned her radiant face and nodded in her charming way her appreciation to Webster, who by instinct had risen, and, with a majesty sublime, bowed his recognition. It is said that in all her career she never had such an ovation as that which greeted her when the full significance of the moment burst upon the audience.

None of us appreciate the beauty, the power, the glory of music. It not only comforts and inspires the needy of earth, but at the dawn of creation the morning stars sang together, and at the advent of Him who said, "Come unto me all ye that labor and are heavy laden, and I will give you rest," the very heavens echoed the message: "Peace on earth, good will to men."

Rhythm is a combination of very distinct ideas; it is keeping step like an army, it is flowing like a river. It is measured time, and yet it is time flowing in unbroken movement. The accent gives the continuous flow to sharply marked-off measure.

All physical life is perfect in proportion to the perfection of its rhythm. The faintest touch of life in the crudest, slimiest mold that gathers under damp bark in the tannery yard is a little world in which rhythm reigns, while, at the other extreme, the latest revelations of brain activity tend to show that there are no currents of force, but rather a reign of rhythm, among the brain cells. The movement of these, and not their touch, is the source of mental activity.

The essence of the lowest traceable vegetable life is rhythm; the highest flights of poet and orator, the sweetest affection, the loftiest reaches of faith, joy, and peace, are rhythmic activities of matter, mind, or emotion.

Lack of appreciation of all this has prevented the school from rising to the heights it should attain. In mathematics we find rhythm as an exact science, as perfect in its way as the movement of the spheres. The pianist attains the art of touching the keys with rhythmic accuracy without following the hand with eye or mind. There is no satisfaction in arithmetical work until the pupil knows the fundamental combinations and processes as the pianist knows the keys. Every child soon knows the sum of two numbers as the pianist knows how to strike the chord.

The pupil who adds by counting with his fingers is lacking in the "ear for numbers" as much as the child that counts the octave on the keys is lacking in an ear for music. You do not give up with the child who counts his fingers, but you keep him wrestling with the numbers until he has them fairly well in mind. The pupil that does not know the chords simply needs a more skillful treatment, because music is higher in the realm of art and science than arithmetic.

Those who have the rhythm of language need neither drill nor grammar, but there are those who must be helped to this rhythm by both. Spelling is universally acknowledged to be a matter of rhythm, and we may as well admit that this same is true of the skill for gathering and classifying information in geography, science, or history.

The "new education" is the dawn of a brighter day. The dawn in the new education seems, however, to have heard the command of Joshua, and the sun is standing still just below the horizon, leaving us in the dawn of perpetual promise. The old way was mechanical; the new has activity, but too often merely mechanical activity. If it has life, it is too often a military life, keeping step to the word of the drillmaster, a measured tread that breaks the bridge by its terrible swing, whereas it should be the life of the bird upon tireless wing.

The kindergarten of Froebel was a prose poem. Life in the kindergarten is social rhythm, with the voice as natural as the note of the lark, the language as easy, and the courtesies of life as graceful, as the rhythm of nature. All this should be retained in elementary and secondary school, in college and university, and it will be when music is appreciated as the keynote of all intellectual activity and social grace.

Whatever our theological prejudices, we must all admit that the most beautiful conception of the ages is that of the Child of the Manger, whose birth and growth, childhood and manhood, were humanity touched with the melody of heaven.

It is a long reach from the child of the slums to the saint in glory, but it is no longer than from the slimes of the pond to the purity and sweetness of the unfolding lily. Our faith believes all things possible with people, but not with persons. Whoever and whatever can give the teacher whose life is being worn out by her dull boy faith to believe that there is power in earth or heaven to make of him a pure, agreeable, self-sacrificing, noble man is doing more for the world than he who has invented a battalion of "the best methods" in number work or language teaching. Music has in it greater possibilities along this line than any other subject. And yet there are those who think the value of the multiplication table in business is infinitely more important than music, which if taught with half the faithfulness of arithmetic, might be made to transform many a mischievous boy into a glorious character.

Who shall state the ratio between a boy grinding away on a distasteful lesson because the eye of the teacher is upon him, with the truant officer at the door, and the boy who is enthusiastic over his school work because the melody of rhythm thrills thru every lesson?

Does some teacher, who has no faith in the possibilities of the bad boy, say sneeringly that it is idealizing when we say that a school ought to be a place in which the rhythm of heaven thru music should touch the life of the child of the street, so that his thought and hope and faith shall eventuate in that character and power for which the Great Teacher came among men?

If so, he sneers not at us, but at Him who gave us our ideals; and it is better to stand humbly at the feet of the Great Teacher than to be with those who reviled.

THE NEXT STEP—WHAT SHALL IT BE?

BY MRS. CARRIE B. ADAMS, TERRE HAUTE, IND.

We have reached a point in regard to the idea of music as a necessary subject in the school curriculum where no vociferous agitation or defense is called for; in fact, in most quarters we are rapidly taking upon ourselves the relieved, resting air of one who has fought a good fight and won the victory. It has been a hard-fought battle in many instances, but the victory is ours. Public sentiment says it; patrons say it; pupils say it; teachers say it; school boards say it; educators in every stage of enlightenment say that music is necessary to the symmetrical development of the child, for whose sole good the schools exist. There is no chance to argue the question here, since we are all on the same side, and not a single reason why we should attempt to justify this state of affairs. We have passed that stage, happily, and may now rest from our labors and enjoy the fruits of our years of strenuous effort. Music has at last come into its rightful inheritance—the minds, hearts, voices, and lives of the masses—and perchance we have been instrumental in bringing about such a happy state of affairs in our own particular little corner of the earth, and we may now sit down and behold its progress. May we? Will we? Dare we think of such a thing, when the very success of former efforts places us under a double obligation to use all our power and strength that success may not turn into failure? Ah, no! Pity the man or woman who thinks of rest at this stage in the history of music as an educational force. We are weary, perhaps, but the reward is great to those who labor—and there is resting by and by. Put the thought aside, and let us look over the field.

What influences have had to do with making music a recognized necessity in every school curriculum that pretends to be up with the times? As well may we ask what wonderful influences have revolutionized the educational world since some of us learned our a-b, abs. Perhaps Mr. McGuffey, of first-reader fame, wherein occurs the question and answer, "Do we go up? We do go up!" may be credited with a prophetic eye, since we certainly have "gone up" to the very mountain tops in comparison with the plane we occupied then. In fact, we are so very much elevated that we have one of three things to do: remain placidly, contentedly, inanely where we are; slide down from the mountain tops; or build us more stately mansions. If build we must, it behooves us to look well to the foundation we have laid. Perhaps it is not broad enough for the support of an imposing musical structure; perhaps it is not deep enough to withstand the strain of any but a light, ephemeral style of architecture, calculated to please the taste of the casual observer; perhaps we as builders have not given every stone in the foundation the honest thought the cause deserved, or thru ignorance have used the wrong material in constructing our part. At any rate, we might investigate.

So much depends upon good teaching, if music is to be the wonderful power we confidently hope and expect, that an investigation that does not take the teacher into account, with her opportunities for training and her general ability and preparation for the work, would be a remarkable one indeed. Music is so peculiarly susceptible to the teacher's influence that it would be difficult to overestimate her importance in this field. Of course, there are innumerable teachers of the infallible type in other states, but the millennium is not yet shedding its beneficent rays abroad in Indiana. In fact, the feeling seems quite prevalent among us that there are some things we do not know, and, alas! may never know. Therefore my remarks may be understood to have reference to affairs as observed by an Indianian, where teachers are ordinary flesh-and-blood mortals, with days constructed on a sadly limited scale of hours and minutes, considering the amount of work to be done, while a similar discrepancy is noticeable in the nights.

Every teacher present recognizes the fact that a comparatively small number of schools in any state employ competent supervisors of music, and that a comparatively small number of school children outside of the larger cities receive their musical instruction from teachers especially trained for that work. The other fact is also being recognized, that music is being taught in three-fourths of the common schools, upon the recommendation of patrons, boards of trustees, county and state superintendents —all of which indicates a delightful state of affairs. But if specially trained teachers are not doing the work, who is doing it? The regular teacher, to be sure. And where does the regular teacher supply herself with the necessary information to carry on this work intelligently? "Dear me!" says one teacher, "I didn't know one had to study music to be able to teach it. I thought one simply needed to be able to carry a tune and know something about lines and spaces!" The honest truth about the whole matter is that half the music teaching in our public schools is done upon the basis of being able to carry a tune and knowing something about lines and spaces. Not in the schools where a special music teacher reigns supreme—oh, no!—but in the little red schoolhouse and two-story white frame or brick village schoolhouses, where a numerous host of children are getting their first long-coveted taste of the divine art.

Of course we know that every school should have lessons in music from a special music teacher, but we also know that such an arrangement is not possible as yet, and that the regular teacher is supposed to direct this work as she does all other required branches. Where does the common-school teacher get her training for this and other work? If in the course of human events she decides to become a teacher—and there are many and divers reasons aside from a divine call for such decision—she naturally turns to the school created by law to give her the professional training she requires, the normal school. With what previous preparation does she come? Formerly she came blissfully ignorant of most things a teacher ought to know, and seldom stayed long enough to acquire the academic knowledge necessary for a teacher; and her mental condition was such that the small amount of musical training offered by the average normal school was all but useless. But now she must hold a two-years' teacher's license in her hand before she is allowed to enter—or at least such are the conditions in the Indiana State Normal School.

What does she bring in the way of previous musical training? Very little. Nine-tenths of the students who enter the music classes in a normal school have lived where musical advantages were limited to the Sunday school and an occasional term of singing school. While the average Sunday school does the best it can with the music and means at its command, as a source of correct ideas of music and singing its influence is not altogether to be desired. The singing school (alas for those whose main musical dependence it was!) is relegated to that past which is the home of the melodeon and "Lily Dale," "Fairy Moonlight," "Fairy Belle," and other old favorites, and nothing has taken its place as yet.

Taking her, then, with her meager supply of musical knowledge, what does the average normal school do for her? Places her in a class with a hundred other similarly equipped students — or perhaps with that number of students in various stages of development, which is much worse — and attempts to administer musical instruction in such heroic doses, as she is ground with the ninety and nine others thru the same mill, that she will come out at the end of the one or two terms provided in the course fully equipped to direct the music work in her next school! Often that grind consists of mere mechanical things, and often the time allotted in the course of study to music is so short that there is absolutely no time for individual work, and as equally absolute necessity for a hurried going over of the many important fundamental things in music before the term shall end and the student departs forever.

Some normal schools provide bountifully for the music work, but as a general thing the course is limited to two or three terms of twelve weeks each. How can a teacher of music be equipped in that length of time, unless previous experience and training make it possible? And why should not those who desire to fit themselves for this line of public-school work find ample provision made for their wants in music, as in mathematics, in a normal school? As a matter of fact, more necessity exists for it, since the average student has had a more active mental experience with mathematics than with music. More especially is there a necessity for superior musical advantages in a normal school now, when so much is expected of the regular teacher, and when music is being experimented with in so many of the smaller schools. The course should be such that, when the teachers' examination shall include an examination in music, the student will not look upon it as a bugbear to be dreaded, but will be able to answer any reasonable set of questions, after having finished the course in a normal school.

What are some of the essential things in music? If it is public-school music, the answer would be one thing, and if it is instrumental music, the answer would be something else. The fact that vocal music is more universal than instrumental is one reason for its study in the public schools, which leads me to say that the making of children's voice habits should receive much more thought from parent and teacher than has ever been given to it. Why should the teacher's voice stand in the way of the progress of your boy or mine? The advantage of a soft, low voice is preached on every side, and very little attention is given in training schools for teachers toward modifying and making melodious the oft-times sharp, wiry, aggressive voices of those whose peculiarities of tone and enunciation will be imitated by a roomful of little ones some day and somewhere. A very large field opens to those who realize the importance of a well-managed voice, whether in speaking or singing, when the imitative faculty of even the dullest child is considered.

Have you ever visited a little country school where eighteen or twenty children of assorted sizes and ages were being cared for by a faithful teacher at so much per month, and not so very much either, for from three to seven months in the year? And have you heard this willing soul try to give a music lesson? Or perhaps you have in an unguarded moment asked to hear some of the songs the children have learned. Did you not say in your heart, as you endured to the end, that it were better never to have had singing than to have had it done in so barbarous a manner? Softly, my friend! Did not that little teacher do her most conscientious best, according to the light she had? And what more do you, oh! ye of ten talents? Let her sing and teach others to sing; but speed the day when her opportunity to learn how to sing and to teach others to sing may be largely increased.

Every normal school can teach its pupils to use the organs of speech neatly and accurately, and what accomplishment is more valuable to a singer than this? Not all souls are capable of the largest expansion any more than all voices are capable of thrilling an audience, but all organs of speech and song may be cultivated to a higher degree of usefulness, and especially is this culture to be desired in those who are to look after the music work in any school. If, in the coming years, more general exercises of a voice-refining nature are introduced in the normal schools, our little district-school teacher will be able to dispense with the nasal twang, the uncultivated enunciation and slovenly articulation, or the metallic tone, almost unconsciously, since she, too, is possessed of the faculty of imitation, and only needs opportunity to use it under advantageous circumstances to make rapid progress.

What an immense stone in the foundation we are laying is the rote song! And how frequently is it used as a mere physical exercise! The fact that words count is so lamentably ignored by singers of otherwise fair intelligence that one is not astonished to find teachers who need the unseeing eye opened in regard to the manner of using songs in the schoolroom. Sacrifice the music if you will, but keep the sentiment underlying the words ever in mind. If there are doubts as to the children's ability to express and appreciate that sentiment, an error in selection has been made, and the song should be laid aside. Where shall the teacher lay the foundation for this discriminating taste and judgment in the selection of rote songs? Her whole training and experience, that make her a success as a teacher of other branches, aid her in this, and I see no reason why more definite work may not be done along the line of rote songs in a normal training school, when its vast importance is considered, and when the fact is recognized that in hundreds of schools the so-called music work consists of rote singing entirely.

Everyone should be intimately acquainted with the tonic, dominant and subdominant triads, and their family connections and interrelationship, if she would enter more fully into the joys of music. Why not have harmony in our foundation, since it is the essential element in our superstructure? Could not the public schools plant the seeds of harmony, at least, and in some instances even water them, trusting to providence for the increase? Suppose the boy's voice is changing and he does not care to sing, partly because there is no certainty that he will succeed if he tries, and partly because he is relegated to the too often tuneless realms of alto at the first suspicion of a croak, when he naturally prefers a tune. It is as certainly wrong to take all music study away from him at this time as it would be to force him to sing, croak or no croak.

Why not require less singing, and more study of the scientific and historical side of the subject, at this particular period in the mental life of the boy or girl, thru harmony and biography? Wouldn't the principal triads and the dominant seventh, with their progressions and resolutions, prove interesting to any mathematically inclined youth? His ability to think tones certainly need not cease with his ability to make tones that are satisfactory to himself and others.

I question the judgment of a supervisor of music who does not call to his aid the unlimited source of interest and inspiration to be found in biography—one of the most important stones in our foundation. I know a supervisor who doesn't, but he doesn't live in Indiana, and I don't know that he is present. In one schoolroom with which I am familiar a bust of Beethoven frowns down upon the children from his pedestal. "Why does he look so cross?" inquired a small boy. The teacher in charge knew just what to say, and within a week every child in the room had ransacked home and school libraries in search of points of interest in the life of Beethoven. Instead of the disagreeable expression they saw before they had read of his unhappy life, they found an element of sadness that aroused their sympathies every time their roving eyes rested upon his face.

Another stone that our builders are using freely is good music, whether written by the old masters or by modern composers of skill, and it is a most gratifying thing to note the purity of style and form to be found in the exercises and songs in the various courses in music for use in the public schools. It is not enough that the children sing good music, however. It isn't the music we ourselves are able to make that influences us most; else music's power would be decidedly limited, in some cases. Why not brighten our structure with bits of color in the form of illustrated sketches of various composers, including American writers?

Any of the simpler forms of the classics in an appropriate biographical setting may be invested with great interest for a roomful of children, if intelligently interpreted. The masses will sing and play good music when they have been shown where to find it in the simplicity adapted to their needs, and it is thru the door of the little red schoolhouse, or the stately portals of the city school building, or of the yet more dignified normal-training-school entrance, whether controlled by state or private means, that this artistic touch must come.

If we cannot have trained supervisors of music in every school in every county in every state, then, in all justice, give those who prepare for the work of school-teaching in our normal schools better opportunity to learn the fundamental things in music, before they are expected to comprehend this (to them) almost unknown subject and teach it to their helpless pupils. As well expect a teacher ignorant of Greek to study methods of presenting the subject for a term, and then be able to do successful work with a class of beginners! Not all students who attend normal schools are destined to become shining lights in the teaching profession, but a large number will be engaged as teachers, and many of them will be obliged to teach with but little time spent in preparation, for financial or other reasons. It isn't to be expected that the subject of music will receive the time and attention its newness and importance deserve, but the training for teaching that does not aid in presenting a music lesson is not all it should be. A good *teacher* is often more successful with the music work than a good musician—and therein lies our hope.

The thing most teachers need is an actual working knowledge of the subject-matter of music first, and the ability to use the formal side subjectively next. It is absolutely necessary for a teacher to know about the means of representing tones, else how can she know when *not* to teach signs? Even special music teachers need to be reminded occasionally of the fact that music does not consist of notes, bars, lines, spaces, etc., and what wonder if the regular teacher falls into the rut of sign teaching alone, when her training includes little more than sign work, frequently? The special teacher must have the intelligent assistance of the regular teacher, if music is to be used to the fullest advantage in the schools; and today, as never before, we look to the fountain head, the normal school, for the training that will make this possible. The teachers will gladly take all of the instruction in music that the required course of study will permit, and I confidently expect to see such changes in the requirements as will give them the opportunity to prepare fully for this work, which is soon to be a part of every teacher's daily program in the common schools and in the grades.

Our builders are, in the main, honest. Our architects are planning according to the needs of the masses. We are not standing still, neither are we losing ground. We have laid the foundation upon which to erect an educational edifice of more varied beauty and usefulness than has ever yet been erected, and the strength of the pillars which shall support the final dome of this intensely, artistically, characteristically American structure will be based upon public-school music work, which shall include mind, voice, and soul culture; a knowledge of combinations as well as successions of tones; and an interest in what has gone before, what is, and what will be, with the regular teacher amply prepared to direct the music work as intelligently as she directs the work in other branches. The next step? Well, what shall it be?

DISCUSSION

MISS SARAH L. ARNOLD, Boston, Mass.—The question asked by Mrs. Adams has been answered by the singing of the pupils this afternoon.

The theory needed to put music in the right place is to make the regular teacher believe that music is essential. What does it do for children? One hard task is to secure the habit of attention; to see the note, to fix its position in pitch and its length, requires intense attention. When things go wrong in school, music brings sympathy and a willing spirit more readily than scolding. When they sing together, a sweet unity is secured, a forgetting of self, a merging into one under the control of the teacher. This oneness is higher than unity. Harmony is higher—means a broader musical conception, a blending in one beautiful whole. The task of the twentieth century is to learn how to live together in peace and happiness, and music is one of the most potent agencies in bringing this about.

DEPARTMENT OF BUSINESS EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—Friday, July 8, 1898

The department convened in the Academy of Music Friday afternoon, July 8, at 3 o'clock, and was called to order by the president, D. W. Springer, of Ann Arbor, Mich., who gave the annual address.

Following this, Hon. Lyman J. Gage, secretary of the treasury, Washington, D. C., gave an address on "Reasonable Expectations in Business Education."

J. M. Mehan, of Des Moines, Ia., chairman of the Committee of Nine, presented a model business-college course.

Professor Emory R. Johnson, University of Pennsylvania, Philadelphia, read a paper on "Business Education in the High School."

M. A. Grove, of Harrisburg, Pa., was chosen secretary *pro tempore.*

The department adjourned to meet July 11.

SECOND SESSION.—Monday, July 11

The second session of the department convened in the rooms of the Spencerian Business College at 3 o'clock P. M., President Springer in the chair. The meeting was a round-table discussion of the papers presented at Friday afternoon's session. Owing to the sickness of Mr. Mehan, most of the meeting was devoted to the consideration of the course of study as submitted in the president's address.

The matter of a uniform course of study for business colleges, which has been in the hands of the Committee of Nine, was referred to a committee, consisting of J. M. Mehan. Des Moines, Ia.; J. E. King, Rochester, N. Y., and J. W. Warr, Moline, Ill., to prepare the same for publication, and report to the department at the meeting in 1899.

The election of officers for the ensuing year resulted as follows:

President—Allan Davis, Washington, D. C.
First Vice-President—I. O. Crissy, Albany, N. Y.
Second Vice-President—Court F. Wood, Washington, D. C.
Secretary—W. C. Stevenson, Emporia, Kan.
Chairman Executive Committee—Carl C. Marshall, Battle Creek, Mich.

A resolution was passed thanking Mrs. Spencer for the use of her rooms for the sessions of the section, and the local committee for the efforts made in behalf of the department.

Adjourned to meet July 12.

THIRD SESSION.—Tuesday, July 12

The third session of the business section convened in the rooms of the Spencerian Business College, Tuesday afternoon, July 12, at 3 o'clock. George M. Coffin, deputy controller of the United States treasury, Washington, D. C., gave a paper on the "Administration and Bookkeeping of a National Bank, and the Qualifications and Training of a Bank Accountant."

A. O. Kittredge, editor of *Accountics*, New York city, presented a paper entitled "Bookkeeping and Accounting of the Periodical Publishing Business."

I. O. Crissy, examiner of business schools for the state of New York, read a paper on "Business Education in the State of New York."

Mr. David Wolfe Brown, chief reporter of the United States House of Representatives, presented a paper on the "Qualifications and Training of the Congressional Reporter."

The president-elect was introduced, and, after he had expressed his thanks to the section, the meeting adjourned.

M. A. Grove,
Secretary pro tempore.

PAPERS AND DISCUSSIONS

BUSINESS EDUCATION

BY DURAND W. SPRINGER, ANN ARBOR, MICH.

The public-school system of a utopian state should enroll the entire population of the country between the ages of five and eighteen. In the United States we are confronted with different conditions. In the year 1870, 61.45 per cent. of the school population was enrolled. This percentage has increased to 69.85 per cent. in the year 1895. Of this enrollment 50.48 per cent. are boys. This total enrollment is divided among the various branches of education as follows: the elementary schools, 95 per cent.; the secondary schools, 3.6 per cent.; the higher schools, 1.4 per cent. The secondary schools contain our youth between the ages of fourteen and eighteen, and it is with this branch of the system that we are particularly interested. Up to the year 1887 private secondary schools enrolled a larger number of students than did the public secondary schools. The growth of enrollment in the private secondary schools has been but one-hundredth of 1 per cent. in the last twenty-five years, whereas the enrollment in the high schools has increased tenfold in the same time. While there has been this marked increase in attendance upon the high school, it is a noticeable fact that the boys form but 45 per cent. of the secondary enrollment. In addition to the students found in these distinctive secondary schools, there are one hundred thousand students of the same age pursuing courses in the business colleges of this country. This is a number equal to the total attendance on all the various higher institutions of learning. This large attendance upon business colleges indicates a feeling in the minds of a large number of people that the public schools are not furnishing the education they desire for their children. It was this same feeling that caused three students to attend the private secondary schools twenty-five years ago where one attended the high school. When our high schools shall meet the demand for education along business lines, as they did along preparatory lines, another corresponding ratio of increase in attendance upon the public schools will be noticed.

The public secondary schools were primarily established for the purpose of fitting the student to pursue a higher education. The course of study was originally a rigid one, but from time to time changes have been made and new studies added, till now hardly any high school offers less than three distinct courses of study. As has been indicated, these changed conditions have greatly increased the attendance. In the high schools of the United States the graduating class of 1896 contained but 12.05 per cent. of the enrolled students for that year. Of those who graduated 29.28 per cent. went to college. But 13.82 per cent. of our high-school students are preparing for a higher education. The old idea that the secondary school was a preparatory school has been outgrown, and the secondary schools have become the finishing schools for over 85 per cent. of the attendants. The high school, in order to benefit the many, which it should, must be adapted to the needs of those who can go no farther along educational lines. The larger percentage of those who leave school prior to completing their secondary education are boys. The largest number of them drift into various occupations, and yet, of the boys in the United States between the ages of fifteen and nineteen, there were over a million, according to the census of 1890, who could not be located in any of the gainful pursuits or in any of the schools.

What as to the education that has been offered in our secondary schools? It is probably as thoro, as far as it goes, as is any. It has been an evolution, and a rapid one at that. It is not in a spirit of fault-finding that the suggestions of this paper are made, but rather with the idea in mind that we have now reached a point where we can broaden the work and be of benefit to a larger number and a different class of persons than have the schools of the last twenty years. As has been suggested, many students have left school at about the age of fourteen, because the opportunity was not offered them in the public schools along the lines that they wished to pursue. Being designed as a preparatory education, it has failed to benefit, to as large a degree as it should, the class of children that needed it the most—namely, the children of the poorer classes. While theoretically the education that is best for those who go to college may be best for those who do not, practically it is hard to convince the masses of the truth of that statement. The tendency of higher general or culture courses has been to breathe a spirit of contempt for business and labor. This has usually been the outgrowth of the feeling on the part of our teachers of largest culture that the ambitions of the average business man were purely mercenary, and the impractical methods of many of these same educators have developed in the minds of the business community the idea that the predominating education was too theoretical. The modern classical course affords a special as well as a general education, and is pursued by a majority of those taking it for purely utilitarian reasons. The present classical and Latin courses are the natural preparation for the intellectual, professional vocations; as such, they have a right to exist. Society needs them.

The education of democratic people, provided at public expense, should prepare them for intelligent citizenship. It should aim to adapt every citizen to the civilization of his time. Conditions change, and so must systems of education. The student should be put in touch with what is taking place, rather than with what has occurred. The past should be studied for the lessons it gives as to how the present should be lived. Education has been recognized in our laws as one of the necessities of life. From the standpoint of the individual, it is as valuable to the poor as to the rich; and from the standpoint of the state, much more valuable. It should develop the powers of the individual to their fullest state of usefulness, for the individual is the foundation of society. The main purpose of our secondary schools should be to fit the students for honorable and useful lives. Power concerning the everyday events of life is the one thing to be obtained. The most important accomplishment which any person can possess is the ability to support himself and those dependent upon him. His next aim should be to benefit those with whom he comes in contact. What spare energy remains he may use in indulging in those lines of work in which he is especially interested and which minister to his personal gratification. That is the best education which not only disciplines the mind and gives to us pleasure in its pursuit, but which at the same time fits us to mingle in society and the business world to its and our own betterment.

This is essentially a business age. With twelve million voters in this country, there are nine million depositors in banks, and over one million persons so engaged in business as to have credit ratings in the commercial directories. According to the census of 1890, 47.95 per cent. of our total population over the age of ten was engaged in some gainful occupation. These were divided as follows: agriculture, fisheries, and mining, 39.65 per cent.; manufacturing and mechanical industries, 22.39 per cent.; domestic and personal services, 19.18 per cent.; trade and transportation, 14.63 per cent.; professional classes, 4.15 per cent. Between the years 1880 and 1890 there was a marked decrease in the percentage of those engaged in agriculture, a corresponding increase in the percentages of those engaged in trade and manufacture, while the percentages of the professional and domestic classes remained about stationary. There are more persons engaged as bookkeepers, clerks, and salesmen than in all the professional classes combined. In the professional and domestic classes we find two males employed for every female; in the manufacturing and mechanical industries the ratio is four to one, while in the agricultural and trade divisions it is nineteen to one. These figures merely show a tendency of the times. Our boys are leaving the public schools to go into some form of business or employment. If by any means they can be held — and we can, in addition to the direct professional training, which will be the motive for them to stay, give them a certain amount of general education — we shall to that extent have succeeded where now we entirely fail. If this be done, the successful business man of the future will be one with broader ideas and possessing more culture and refinement than does the business man of today. Business has become the greatest profession of the age. The business man is the controlling element of society. He needs as complete an equipment as is possible, and the more complete it is, the better will be the society of the future.

The question arises: Ought the public school to give any distinctive training along professional lines? Statistics show the truth of the statement, made a few minutes since, that the classical course affords a distinct professional training. Professor Edmund J. James, of the University of Chicago, said in an address before the American Bankers' Association: "The business class is the most important in numbers and influence left without any provision by government for the professional training of its members." Commercial training should be offered in the public schools at two points. In the elementary schools business forms should be studied and enough of bookkeeping so that those who leave school may be able to keep a private set of books. The value of such instruction to the country, from an economic standpoint, can hardly be appreciated. In the secondary schools the ideal condition would be that in which no regular courses were offered, but the students were free to elect the studies desired, with the guidance of the teacher and under such general rules as should prevent hit-and-miss courses of study. A diploma should then be given according to the work that has been done. We are not ready for that in this country, however, and we claim that the people have a right to demand a course which shall run parallel with the classical, Latin, and scientific, and shall be so framed as to afford an incentive for the youths of our country to remain in school for a longer period than they now do, because the instruction received shall be such as will be valuable to them in the business world. We claim the right to a course which shall offer a training in the commercial vocation equal in value to that which is now offered for the several professional vocations. The aim of this course should not be to draw students from the others, but rather to enlarge the scope of the high school. Neither is it intended that such a course should supersede the business colleges of this country. The high schools have not driven out the private preparatory schools. They have, however, stimulated them to renewed activity, and compelled them constantly to increase the effectiveness of the courses offered. The aim of the commercial course should be to supply that form of a business education which the business colleges cannot. It is not expected that this course will be able to make successful business men any more than medical and law schools are able to produce successful doctors and lawyers. On the other hand, it should not strive to make mere bookkeepers or clerks. While it may not make a finished man, it should give him power. It need not necessarily be narrow merely because it is professional. Its aim should be to train the mind along certain channels which it must take in following a business career. It should not aim to give simply what will be of immediate use, but rather principles which will give the possessor a grasp of things that will enable him successfully to master difficulties as they arise. And a special reason for the establishment of such a course is to be found in our present foreign relations. The entire policy of our country may be changed, as a result of the war in which we are now engaged, in which case the business man will be more than ever an important factor.

The course outlined for you today is one which is probably different from what many of you would select. I am not sure but that a year hence I would advocate some changes in minor points, but so far as the general principles are concerned, it is one which, I think, could be introduced in every high school in our country without danger as to the effect upon the present students, with benefit to the students whom it would attract, and with no detriment to any part of our educational system. I favor, of course, a commercial course coequal in length, number of studies pursued, and intensity of work with all other courses offered in the same school. Short courses weaken the effect in the minds of the students as to their value, have a tendency to draw the poor students from all other courses, and are generally unsatisfactory. The experience in the European schools where the commercial course has been given side by side with the others is that it has been neglected. If the same is to be true in this country, then the work should be offered in separate commercial high schools. If it can be accorded a place side by side with the others, it would be better for all. It would then be possible for those pursuing other courses to take a small amount of work along this special line, if they so desired. It is also probable that, by coming in contact with students pursuing other lines of work, the mental horizon of the commercial student would be broadened. With regard to English you will notice that the work is largely that which may be called "unprepared." I believe composition work to be the point at which we need to bestir ourselves the most. I should like to see the principle of "every teacher a teacher of English" so emphasized that it will be impossible for a student to receive credit in any subject, no matter how correct may be the paper with regard to that particular topic, if it is faulty in English.

In conclusion, I cannot help but express the hope that the work in higher commercial education begun at the Wharton School of Finance, and now being inaugurated in the universities of Chicago and California, will continue to grow until the time shall come when the completion of some such a course as is presented here today may be considered sufficient preparation for admission to any college or university in the land.

COURSE OF STUDY FOR A COMMERCIAL HIGH SCHOOL

FIRST YEAR

FIRST SEMESTER

German, Spanish, or French	5
Algebra	5
United States History	5
English	5

SECOND SEMESTER

German, Spanish, or French	5
Commercial Arithmetic	5
Modern History	5
Correspondence and Penmanship	5

SECOND YEAR

FIRST SEMESTER

German, Spanish, or French	5
Algebra	5
Physical, Commercial, and Industrial Geography	5
Free-hand and Instrumental Drawing	3
English	2

SECOND SEMESTER

German, Spanish, or French	5
Bookkeeping	5
Botany or Biology	5
Typewriting	3
English	2

THIRD YEAR

FIRST SEMESTER

German, Spanish, or French	4
Accounting	4
Civil Government	5
Chemistry	4
English	3

SECOND SEMESTER

German, Spanish, or French	4
Office Work, and Customs and Methods of Business	4
Commercial Law, and National and Foreign Commercial Legislation	5
Industrial Chemistry	4
English	3

FOURTH YEAR

FIRST SEMESTER

German, Spanish, or French	4
Physics	4

History of Commerce and Industries	4
Study of Products and Fabrics	4
English Literature	**5**

SECOND SEMESTER

German, Spanish, or French	4
Physics	4
Economics	4
Geometry	5
American Literature	**3**

REMARKS.—1. The above outline presupposes a study of business forms in the eighth grade, and enough of bookkeeping to enable one to keep a private cash account.

2. The figures to the right indicate the number of recitation periods per week.

3. Black-faced figures indicate that the lessons should not require extended outside work.

4. Stenography may be substituted for any ten hours' work. No credit for the study of a foreign language should be given unless it has been pursued at least two years. If, therefore, stenography is substituted for one year of a language, but one foreign language can be taken.

5. Each student should be required to devote at least three hours per week to systematic physical development and one hour per week to acquiring the art of public speaking.

REASONABLE EXPECTATIONS CONCERNING BUSINESS EDUCATION

BY HON. LYMAN J. GAGE, SECRETARY OF THE TREASURY OF THE UNITED STATES

It is a great honor—one in the present instance dubiously deserved—to be called upon to speak to a company as large as this, where nearly all of the units composing the group are fully certified to as carefully educated persons. One may well fear the exercise of a long-established habit of criticism, which it is the educator's duty to constantly observe and fittingly apply.

I am asked to talk for a few minutes—if I remember correctly, emphasis was placed on the "few"—upon the reasonable expectations in business education. Now, there are evidently three important, but well-differentiated, parties who may entertain "expectations" as they relate to education. These parties are the educator, the educated, and the great public to whom both the others are allied. In reflecting on the theme, I thought to take these parties seriatim, and consider from the standpoint of each what reasonable expectations each might be justified in cherishing. There is a well-used phrase—very sententious—which has sometimes been found in bad company, to this effect: "What is there in it for me?" and I asked myself this question, as it affects the educator or the teacher: What is there in education—business education, or other—for the teacher or the school? The answer came promptly: Nothing—next to nothing—either in a material or financial way. Much of labor; much of anxiety; many chagrins; much work seen in advance to be comparatively hopeless, as is the tilling of barren ground; much lack of appreciation, both private and public; many evidences of absolute ingratitude. A discouraging catalog, if there were nothing else; but there is something else. There is the sense of co-operating in a large work; the consciousness that one is working to make the world wiser and better. A generous-minded man once said to me: "I have given money quite freely to relieve the distressed, to soften the bitterness of helpless age, and to alleviate the condition of the unfortunate; but there was little or no inspiration in it. When, on the other hand, I have helped a bright boy to secure for himself a good education, my imagination has become affected. I saw my dollars — won by hard application in sordid ways — transmuted into intellectual agencies powerful to affect the thoughts and feelings of generations which will live when I am dead." This kind of reward it must be that cheers the educator on. This kind of expectation it must chiefly be that the instructor my reasonably cherish.

So much has been written, so much has been spoken, on the benefits and advantages of education that it requires some courage to try to add anything to the stock of eloquent words now recorded in the interest of that great theme. It was with this fact in mind, it may be, that the program maker asked me to speak upon the "reasonable expectations in *business* education." For it is no doubt true that business education, as distinguished from classical or scientific education, has received but scant courtesy. Indeed, until within a recent period "business" has been classed among the vulgar callings. In England and the court cities of Europe the tradesman of every grade is still held as one not quite worthy of consideration among the learned and polite. Happily in our more democratic land class distinctions, class prejudices, have less influence. Man is here considered for what he *is*. Does he possess elements of power? Is his character upright, are his ways honorable? Does he possess genius for useful work? Can he create or co-ordinate varied forces of production and commerce? Has he the fair and simple manners of a gentleman? These are the tests which determine the degree of acceptability to American social life. But it is not more than one lifetime since business education, as such, received even here no recognition as education at all. Those who ventured to establish schools, with a limited curriculum, designed especially to train the young for the practical affairs of business life were classed as dangerous innovators. On the contrary, they were pioneers of progress, and the roads they have opened will never again be closed. The paths of preparation by which the young can now become the better fitted for the world's work are numerous, and happily there be many who walk therein.

Without attempting to be very nice or strictly accurate in the classification, education may be considered under at least four subdivisions:

1. Manual training, that which relates to the education of the hand and eye.

2. Business education, as represented in our commercial schools and colleges. They deal with the elements of calculation. They inform the mind upon systems of industrial exchanges, trade, insurance, transportation, and banking.

3. Scientific education, which has to do with laws of nature in relation to physics, chemistry, etc.

4. Classical education, which relates to history, art, literature, philosophy.

Now, these all mark, in their progressive order, the advancement of mind and the progress of man in comprehending himself and his environment. But if we were to place emphasis on the relative value to the human family of these four divisions as a whole, that emphasis must be placed in the order stated. It is better that the many should possess moderate intelligence than that the few should be superlatively wise. A knowledge of simple mechanics, gained thru manual training, may give useful bent to millions. It kindles in the mind a taste for inquiry, and awakens a profound deference to the moral laws.

Nature is true to herself, exciting in the student an appreciation of a straight line—of a perfect cube, all the sides equal; teaching him that to shape wood or iron, or to make fine tools of steel, he must obey the laws by which all these things are done. He learns that obedience to formula is the condition of achievement. Loving, as I have said, a straight line, he cannot love a lie. Perceiving the beauty and power of the physical laws, he is carried over to an admiration of and sympathy for the beauty and power of the moral laws.

The influence and effect of a business education are not dissimilar. It opens the mind to a comprehension of that distributive system of commerce by which the division of labor is made possible. It shows the student the interdependence between agriculture and transportation, between manufacturing and insurance. It reveals to him the principles and details of the banking system, that great and useful mediator in all industry and commerce. He learns the power and usefulness of credit, by whose aid things are produced, transformed, and passed on to the consumer. He becomes familiar with the various instruments of the world's exchanges, such as books of account, promissory notes, bills of exchange, ships and railroads. He learns, or ought to learn, the legal sanctities which have been thrown around all evidences of claims and titles. If a diligent student in a proper business school, he will acquire a mental grasp of the simpler principles of political economy, for there are axiomatic truths here, as there are in mechanics and mathematics. That the wages paid to labor cannot exceed the value of the product is as simple a proposition as that the part cannot be greater than the whole.

That wealth is the surplus of useful things, left over beyond the cost or exhaustion of producing them, is equally simple and true. Resting on this satisfying conception, he can no longer be befooled with the idea that wealth can be increased by diminishing the measure by which it is counted, whether that measure be yardsticks, dollars, or weights in avoirdupois.

Thus in the business school, as in manual training, perhaps even to a higher degree, we learn that happiness and success come by observing and obeying the truth as it is revealed in the natural relationship of nature to man, and of man to his fellows. Over us and beyond our control everywhere and always there exist these relationships. Tho unrecognized, yet, if violated, they bring confusion and misery; recognized and obeyed, they bring harmony and peace. "To know this is true wisdom and manhood, and the ignorance of this is too plainly folly and vice." What, then, are the "reasonable expectations in business education" which we are justified in cherishing? Let us not overestimate this. Without overstatement, we have the right to expect from the graduates of business schools and colleges a thoro theoretical knowledge of all the machinery, tools, and methods by which real business life, in its multiplied forms, is carried on. We have a right to expect that the young men and women will go out from these schools with their moral perceptions of the true, the beautiful, and the good increased and strengthened. As the mechanic must love a straight line, a perfect cube, and that emblem of eternity, a perfect circle, so must the student in accounts and business rules come to love an exact balance. A balance in accounts artificially forced to secure the appearance of a just balance is an unforgivable offense, a damning lie. All justice cries out against it, and the educated perpetrator of such an offense is self-condemned as a criminal and a coward. The principles of justice and equity which underlie commercial law, the honorable obligations involved in the relations of debt and credit, these all impress the mind, and are inevitably carried upward with more or less power into all of life's relationships. We have, therefore, a right to expect from those thus taught a better citizenship, a higher manhood, a purer moral character.

But what of business success, of material advancement, of the acquisition of wealth, power, and fame? For it is these, or the expectation of these, in too large a degree, perhaps, that allures the student along this special branch of study. Can we confidently expect these as the uniform, never-failing result of a thoro business training? The answer must be in the negative. Such results cannot be guaranteed. The preparation we are considering will be a most helpful factor. This is the best that can be said. The prizes of life do not always come to the most deserving. Many things must co-operate to bring in great results. Innate ability, which schools cannot furnish, must find conjunction with conditions, circumstances, opportunities which lie out of individual control. Do you find a man great, distinguished, a business Saul among his brethren? Do not worship him overmuch. Perchance among the humble and unrecognized are a score or a hundred as worthy as he, to whom circumstances and opportunity did not come.

The poet sings of the many pearls obscured in ocean depths, which never grace a gilded coronet; of flowers perfect in color and fragrance, bearing witness to their beauty only in the desert air. Such also is the not infrequent fate of modest excellence in all the ways and walks of life.

To be prepared, to be ready to meet the requirements of time, place, and opportunity—this it is to have really achieved, whether the large place, the large opportunity, comes or not. With business education more general, we may expect a better order of business men in all places, both great and small. We may expect less waste, fewer insolvencies. The world's work is to be better done; the individual life, dignified and exalted by higher ideals and purer ethics, will tend more and more to reach that high plane which we may well believe it to be the purpose of God that we all attain.

BUSINESS EDUCATION IN THE HIGH SCHOOL

BY PROFESSOR EMORY R. JOHNSON, UNIVERSITY OF PENNSYLVANIA,
PHILADELPHIA, PA.

A discussion of business education in the high school naturally involves the consideration of two questions: Ought there to be included in the American public high-school system an educational course or curriculum constructed with especial reference to the vocational needs of the students who are looking forward to a business career? And, second, if business education has a proper place in the public high school, what should be its nature and scope?

The general reasons why definite and adequate provision for business education should be made in the public high school have been so frequently and ably presented by educationists and business men that it would be supererogation for me to repeat them at length on this occasion. The argument for this education rests on a dual basis: the educational needs of the public demand it, and it is requisite to the best development of our high-school system.

The high school is the institution of last resort for the great majority of boys and girls who carry their studies beyond the elementary grades. It is the institution in which are developed the ideals and powers which are to control the spirit and efficiency with which they perform the civic and economic duties that their subsequent lives will exact of them. Life is complex, and its duties are diversified; but the high-school instruction, as at present organized, requires nearly the same work of all pupils. Altho many schools have two courses, the classical and the scientific, the studies offered in each course are usually all required of every boy or girl pursuing the work of the course. Moreover, the contents of both courses are such as rather to prepare the pupil for the subsequent pursuit of those special studies which fit for entrance into some learned or technical profession, than to give the young person that education which will incline him to business pursuits, and give him the knowledge and mental habits that will help him to become an intelligent and successful business man. The young men or the boys who expect to enter business when their school days are over—and they constitute the majority of the boys to whom the pursuit of a high-school course is possible—find that no course of study has been provided in our public-school system by means of which that secondary education can be secured which is essential and requisite for him to possess who aspires to become an educated business man.

The result of this is that but few boys graduate from the high schools before entering the business shops, stores, and offices. Indeed, if there be deducted from the high-school graduates those persons who have pursued secondary studies as a preparation for teaching, or for the higher studies which prepare for admission to the various professions, those remaining will constitute but a small percentage of even the relatively limited number of our youths who complete the work of the high school. The high school is at present not appealing to the boys with business ambitions as strongly as it ought.

This statement suggests the other basis upon which the argument for business education in the high school rests. In order for the high school to attain that measure of development which will enable it to fulfill the educational functions which it ought to exercise, it must include within its work of instruction those studies which are needed by the boys and girls who are to enter the business callings. As Professor Edmund J. James has said in his well-known report on *The Education of Business Men in Europe:* "We can conquer the uneducated and half-educated people of this country for secondary and higher education only by offering them courses of study which, while they are of a strictly *educational* character in the best sense of the word, shall also have some bearing on their future everyday life, shall have some direct relation to the work they are called upon to do in the world."

The practices and experiences of foreign countries confirm the soundness of these theoretical reasons for including business education in the American high schools. It is true that there are few, if any, foreign institutions which can be bodily and without change successfully transplanted to another country. Like most exotics, they will not flourish in the unnatural environment, but in the case of educational institutions there is seldom any difficulty in one country's adopting the spirit and ideals which the experience of other nations has shown to be of value.

In Austria, France, Germany, Belgium, and Italy, and in Japan, business education has come to be recognized as an essential part of the educational system of each country. The degree of development varies in the different countries, Germany having the most fully organized plan of business education, industrial and commercial, of both higher and lower grades. Five years ago there were fifty-five schools in the German empire of the rank of commercial high schools, with an attendance of 5,681 pupils. Some of these institutions are supported by merchant guilds, some by cities, and others by the state. Besides these schools there are commercial classes and commercial courses connected with the real schools (*Realschulen*), and supported by the state and the cities. The commercial high schools of Germany are largely attended by foreigners as well as by Germans. The success of these institutions of elementary and secondary rank is evidenced by the fact that a state commercial school of an advanced grade, corresponding to our colleges, has just recently been opened in Leipzig. With the increase of these higher institutions for business education, as the public demand shows the need for them, Germany will cover the entire field of business education in a systematic manner.

According to Professor James' report, already referred to, there are in Austria thirteen commercial academies, or high schools, as we would call them, with an attendance, in 1893, of about three thousand pupils. Besides these there were reported to be 104 institutions covering very much the same ground as is occupied by the commercial colleges in this country. In France there are two commercial high schools in Paris, and one in each of the six cities, Lyons, Marseilles, Rouen, Rheims, Havre, and Bordeaux. Besides these so-called superior schools of commerce, there is at Paris a school of higher commercial studies, in which the more advanced grades of business education are covered. The school at Rheims is now a state institution; the Rouen school is controlled by another educational institution; the other six schools are controlled by commercial corporations; all are subsidized by the state. In Belgium there is the well-known Superior Institute of Commerce at Antwerp, supported three-fourths by the government of Belgium and one-fourth by the city of Antwerp. This institution has a course covering three years, the latter two of which are made up of studies more advanced than those of secondary education. In Italy a school of commerce is to be found in Venice, Florence, Turin, Genoa, Naples, Rome, and some other smaller cities.

The success of these schools abroad shows that there is a real demand for business education of a kind that is not now obtainable in this country. The prevalence of foreign students in these schools — two-fifths of the total enrollment at the Antwerp school consisting of foreigners — shows that the value of their educational work is recognized by the people of other countries.

The advocates of the inclusion of business education in the public high-school system are supported, not only by the theories of educationists and the educational practice and experience of foreign countries, but also by the active co-operation of many prominent business men who are working to further business education in America. The views of men like the late William H. Rhawn, ex-president of the American Bankers' Association; Mr. Theodore C. Search, president of the National Association of Manufacturers of the United States, and Mr. John H. Converse, of the Baldwin Locomotive Works, and others who might be cited, carry much weight. In a letter recently written, Mr. Converse says: "I consider it eminently desirable that there should be a commercial high school, or commercial course in the existing high school; experience will show which is better. In any event there should be, I think, in connection with our secondary schools a commercial course which should be optional, but not obligatory. I would go even farther than this and say that there should be in our universities a commercial course as an elective or supplementary to the regular course." Tho this last sentence is somewhat foreign to the subject under consideration in this paper, it deserves quotation, because it illustrates the liberal views of education held by many successful and influential business men.

The other consideration involved in this discussion is the nature and scope which business education in the high school should have. What kind of education ought the high-school system to develop, if it is to provide courses framed with reference to the vocational needs of boys who are to go into business?

The first fact to be emphasized in considering this question is that business education in the high school should be no less liberal, no less educational, than that received by the pupils who pursue the courses now offered in the existing high schools. Tho intended to minister to the needs of prospective business men, business education in the high school should not be technical, in the sense of teaching the technique of business. The ideal should not be to train pupils in the arts of business; the aim should not be to turn out skilled clerks, but young men with an education that will enable them in due time to take their place in the ranks of educated business men. Before the would-be physician gives attention to the art or practice side of his chosen profession, he takes a course of study whose core is made up of certain natural sciences. He studies the interaction of forces in that large world of life of which man is a part, that he may understand the relation of man to that larger world, and be able to know and deal intelligently with the forces which control man's physical well-being. Similarly, the boy who expects to enter some particular field of business needs to study the laws and forces which obtain in the larger realm of business, and to analyze the political and social forces which dominate the social world in which he is to live and carry on the special business of his choice. The technology of business should be given only an incidental place in high-school business education.

The core of the instruction given should consist of the social sciences. Economics, the science of business affairs, should rank first in importance, and the instruction given should cover the various branches of practical economics as well as the theory of the science. Industrial and commercial history should form an important part of the instruction in economics. Political science, or the study of civic society, should rank next to economics. The political organization of society should be studied in all its more important phases. These courses in the social sciences, constituting the core of the instruction given, should, most of them, be required of all students. The work in English and in accounting should also be required of all, and should be comprehensive and practical. If feasible, most of the other courses offered should be made elective. The modern languages should be given a prominent place as electives; courses in general and applied mathematics should be available, and the natural sciences, especially physics and chemistry, should be open to election.

In introducing business education into our high-school system, the principle of elective studies and selective courses should be accepted at the outset. The acceptance of this principle does not compel us to disregard the disciplinary value of high-school studies. All high-school education should be disciplinary, and, by making the studies which constitute the core of instruction in each course required work for those pupils pursuing that particular course, the disciplinary character of the education will not be lost. We have long since abandoned the notion that there is only one combination of studies possessing disciplinary value. The required studies in the social sciences, as indicated above, would comprise from one-third to one-half of the pupil's work; the rest of his work should be selected by him, aided by the counsel of teachers and parents, with reference to the vocation which he intends to follow when his school days are ended. The vocational needs of the pupils will be varied, and the range of selection should be made as large as the school can afford.

Business education in the high school should be both disciplinary and selective. There is no reason why it cannot be both liberal and of vocational value. In a recent address on the "Scope and Function of Secondary Education," Professor Nicholas Murray Butler closed with the following paragraph:

> A secondary education that is both disciplinary and selective is of unusual importance in this country on both social and political grounds. Democracy needs intelligent

> and trained leadership — leadership in public policy, leadership in industry, in commerce, in finance, leadership in art and in letters. The basis of training for leadership is laid in the secondary schools, where the directive capacity of the nation is serving its apprenticeship. There the majority of men and women who are to guide the destinies of the next generation are putting forth their powers and testing their strength; out of a variety of intellectual interests, nature and environment lead them to make a selection. Training — persistent, thorough, broad — in the field chosen is the surest guarantee, if one can be given, of future success and of future usefulness.[1]

It will doubtless be argued that the scheme here outlined of business education in the high school, whatever may be its merits as an ideal, is impracticable because of the difficulties in the way of securing its adoption and putting it into operation. The argument has force; it is usually much easier to secure half than the whole of a desired reform. It is nevertheless always of advantage to have a clear concept of the ideal to be ultimately attained; the half-way measures secured will be better if we clearly conceive what whole-way measures would be. The advocates of business education in the high school should strive for the proximately obtainable; but should not, while doing this, lose sight of the ideal, nor cease working for its ultimate attainment. As regards the relative merits of selective courses of study as compared with the course of study in which the same work is required of all pupils, I am convinced that it will not be long before the superiority of selective work will have been generally acknowledged. The selective system has triumphed in higher education, and it will surely win in the field of secondary study.

A practical question of much importance, and one that ought to be given careful consideration by American cities, is whether the business education of the secondary schools should be provided for in separate institutions by establishing business or commercial high schools, or should be inaugurated by adding a commercial or business course to the existing literary high schools. In New York the plan which has been adopted contemplates the establishment of a commercial high school as one of the four high schools with which the city is to be supplied. In Philadelphia the board of education has just recently adopted a course of study to be given in a department of commerce connected with the Boys' Central High School. The course will be inaugurated with the opening of the academic year of 1898–99. The experience of foreign countries where business education has become a successful and permanent feature of secondary education is on the side of separate institutions devoted entirely to the work of business education. Professor James says concerning the experience of Austria:

> The same experience has been met in Austria as in other countries, that the attempt to develop commercial courses side by side with other courses in the same institution has not been successful. Generally speaking, such courses have given

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[1] Cf. the *Educational Review*, Vol. XVI, No. 1, pp. 26, 27.

satisfaction to no class of people; they interfere with the healthy development of other courses in the institution, and are uniformly neglected by the authorities of the institution with which they are connected.[1]

This discussion of business education in the high school cannot properly be brought to a close without calling attention to the fact that business education should not be confined to secondary education. The high schools of this country should develop the best possible system of secondary business education. Like the work of all high schools, the business or commercial high schools should be organized with reference to the needs of the community, and not with regard to the demands of the higher institutions of learning. Its courses should be outlined primarily with reference to the educational needs of those who are to engage in active business pursuits upon the completion of their high-school studies, for they will always constitute the majority of the pupils. But, however well the high schools may carry on the work of business education, they can no more give the future business man the education which he needs in order adequately to meet the requirements which his station in life will exact of him than can the literary and scientific courses of the existing American high school furnish that liberal culture needed by those who are to enter upon studies that prepare for professional careers. Both the business man and the professional man need higher education. As the director of the Leipzig Commercial Institute has well said: "The large dealer has no less important functions to perform than the educated individuals of other classes, and he can fulfill them satisfactorily only if he is willing to give as much time and care to his education as the members of other classes are willing to give to theirs."[2]

The higher education of business men has made more progress in this country than has secondary. The Wharton School of Finance and Economy of the University of Pennsylvania has been in successful operation for sixteen years, and three other universities have recently established schools similarly organized. The University of Chicago and the State University of California will each inaugurate a "college of commerce" this autumn, and the authorities of the University of Missouri will open such a college as soon as the legislature appropriates the requisite funds.

The necessity for providing, both in secondary and higher institutions of learning, educational courses adapted to the vocational needs of prospective business men is fast gaining public recognition. It is the special duty and privilege of educators to formulate clearly the ideals which should pervade this new field of education.

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[1] Cf. *Education of Business Men in Europe*, p. 52.

[2] *Ibid*, p. 162.

THE ADMINISTRATION AND BOOKKEEPING OF A NATIONAL BANK

BY GEORGE M. COFFIN, DEPUTY CONTROLLER OF THE CURRENCY, WASHINGTON, D. C.

Before entering upon a discussion of the administration and bookkeeping of a national bank, some definite knowledge of the system under which such banks are operated is essential.

NATIONAL BANK SYSTEM

The national banking system was evolved in 1863 out of the exigencies of a great civil war. To meet the cost of this war the government had to borrow huge amounts, and needed besides large sums of money to pay its current expenses. It had already issued directly about $450,000,000 of paper money familiarly called "greenbacks," but needed more. So the government made to the banks then operating under state charters, and to any new banks which would organize, this proposition: If a bank will buy $100,000 United States bonds, the government will lend the bank $90,000 of national bank currency, holding the bonds as security for the currency, which the bank could immediately issue to circulate as money. The currency is practically a loan to the bank by the government on the collateral security of its bonds, which the bank can regain only by depositing with the government lawful money equal to the currency it has received.

The theory upon which these banks were created is that the issuing of currency to circulate as money is one of the constitutional powers granted to the general government, and that, while the government has not the power to create corporations for conducting ordinary business enterprises, it could create them for the purpose of performing such governmental functions as might be delegated to them.

In addition to this power to issue currency the banks were permitted to do what is known as a commercial banking business, and the system, as it stands today after a test of thirty-five years, represents, with some exceptions, the very best type of commercial banking on a most widely extended scale. Altho the currency now issued by them amounts to a large sum, being about $200,000,000, this feature is dwarfed in contrast with the business of receiving deposits and lending money; for on May 5, 1898, the aggregated reports of condition from 3,586 national banks then doing business, with a capital of nearly $900,000,000, show that they held individual deposits amounting to about $2,000,000,000, and at the same time had loaned the enormous sum of $2,097,094,235, besides having on hand about $460,000,000 in cash, held as a reserve against their deposits. The capital was contributed by over 281,000 shareholders and deposits made by about 2,000,000 depositors.

There is no mystery about national banking. The shareholders who contribute the required capital stock invest it with the hope of making a reasonable profit, and at the risk of losing it all and as much more. For the past few years the enormous sum of $900,000,000 capital invested in national banks has earned only about 5 per cent. average profit per annum.

POWERS OF A NATIONAL BANK

A clear idea of the powers and privileges conferred upon a national bank is conveyed by the language of paragraph 7, section 5136, of the national bank act, as follows:

"To exercise by its board of directors or duly authorized officers or agents, subject to law, all such incidental powers as shall be necessary to carry on the business of banking; by discounting and negotiating promissory notes, drafts, bills of exchange, and other evidences of debt; by receiving deposits; by buying and selling exchange, coin and bullion; by loaning money on personal security; and by obtaining, issuing and circulating notes according to the provisions of this title."

The chief objects, therefore, for which these banks are organized are:

1. The receiving of deposits.
2. The loaning of money on personal property.
3. The buying and selling of exchange.
4. The issuing of circulation secured by pledge of United States bonds.

The intent of the law appears to have been to create institutions which, having a certain amount of cash capital stock actually paid in as a guaranty for the safety of depositors, should act as agents or trustees for the safekeeping of funds deposited with them, subject usually to withdrawal upon demand. In order that these banks shall be able to respond promptly to such demands, they are required to keep on hand in lawful money a certain proportion of their deposits, varying between 15 and 25 per cent. They are permitted to loan out the remainder of their deposits on personal security, upon the assumption that their loans will be made for short periods of time, and so may be quickly convertible into funds wherewith to repay their depositors when necessary.

As a further precaution in this direction they are forbidden to make loans secured by real estate, or by their own stock, or to purchase the stock of other corporations for investment.

ADMINISTRATION VESTED IN DIRECTORS

The administration of the affairs of a national bank is vested by law in the board of directors, the number of whom in no case is less than five.

These directors, elected annually by the shareholders of the bank, have the power to appoint all officers and clerks, define their duties, require bonds of them and fix the penalty thereof; to dismiss any officer or employee at pleasure, and appoint another to fill his place; to prescribe by-laws, not inconsistent with law, regulating the manner in which the bank's stock shall be transferred, its directors and other officers elected or appointed, and its general business conducted.

Each director, when elected, must take an oath that he will, so far as the duty devolves on him, intelligently and honestly administer the affairs of the bank, and will not knowingly or willingly permit to be violated any of the provisions of the national bank act, and that he is the owner in good faith of at least ten shares of stock in the bank, which must not in any way be pledged as security for any debt.

ADMINISTRATION AND BOOKKEEPING

It is now in order to discuss in detail the administration of a national bank, which necessarily includes the bookkeeping.

Before a national bank with $100,000 capital stock can commence business it must have $50,000 actually paid in, and must buy and deposit with the treasurer United States bonds having $25,000 par or market value as security for $22,500 currency which it receives as soon as printed by the government. The remaining $50,000 of capital must be paid in within five months after the bank begins business. When the full amount of each share ($100) is paid in, a certificate of stock, signed by the president and cashier, is issued to each shareholder, stating the number of shares to which he is entitled. A record of all shares issued must be kept on the stubs from which the certificates are detached, and also in a "stock ledger," which contains an account with each shareholder, showing date of issue, and number and par value of shares held by him. Whenever a shareholder transfers his stock by sale to someone else, he must indorse the certificate to the new holder, who surrenders it to the bank and receives a new certificate in his own name. The bank cancels the old certificate, attaches it to its stub, and on the stock ledger charges the account of the former holder, and opens an account with the purchaser of the stock.

DEPOSITS

About the first business a new bank does is to receive deposits. The depositor takes his money or checks to an officer called the receiving "teller," which, by derivation, means one who keeps "tally." The amount of checks, paper money, gold, silver, or small coin stated on a printed deposit ticket is handed with the deposit to the teller, who, on first deposit, gives the depositor a pass-book, in which are entered amount and date of deposit, and usually a book of blank checks with which to draw out his deposit when desired. Only about 10 per cent. of bank deposits are made in actual money, about 90 per cent. being checks and drafts. The depositor writes his signature and address on a card or in a book kept by the bank to prove the genuineness of his signature on the checks he may draw. The teller enters the amount of the deposit in a book, placing the ticket on file, from which it is taken later by the keeper of the "individual ledger," in which is kept an account with each depositor, showing in one column his deposits, in a second the checks paid, and in a third the balance remaining to his credit. Such a ledger is called the three-column or balance ledger.

When the depositor wishes to withdraw any money, he presents his check, payable to bearer at the bank, to an officer called the "paying teller," tho in a small bank the receiving and paying are both done by the same teller. Or he gives his check payable to bearer or order to someone else, who may either draw the money or deposit the check. The paying teller being satisfied that the signature is genuine, and that the depositor has the proper amount to his credit, pays the check in such money as the holder prefers from the supply of currency furnished him for this purpose. Having paid the check, he records the amount in a book, and stamps it "paid" across the face, placing it on file, from which it is taken later by the individual-ledger bookkeeper, who charges it to the account of the depositor on his ledger, and changes the amount in the balance column to correspond.

At close of the day's business the receiving teller, who commences the day with no money on hand, balances his accounts in a book showing the amount of deposits received on one side and the amount of checks and money in his possession on the other, which must equal the amount received, if no error has been made. The paying teller, who begins the day with a stated supply of currency, also makes a balance, showing the amount remaining on hand after deducting total of checks paid during the day. The total of deposits made and of checks paid entered in all accounts on the individual ledger must agree with the corresponding totals on the books of the tellers, if no errors have been made in the postings.

LOANS AND DISCOUNTS

As the chief profit a bank makes is derived from loaning its capital and a portion of its deposits at interest, this feature of the business requires the greatest care and judgment, for if the funds are loaned to borrowers who do not repay them, loss will ensue instead of profit. This department, therefore, calls for the highest display of administrative ability on the part of the directors, whose duty it is to exercise unremitting vigilance and discretion in scrutinizing the financial ability, and, above all, the integrity and punctuality, of borrowers. As a rule, no loans or discounts should be granted by a bank unless approved by the full board of directors, or at least by a committee of their number specially qualified to be judges of credit. This important duty should never be delegated to one director or officer alone. From time to time all the notes and obligations upon which loans are made should be carefully examined by the directors, with a view to seeing that accommodations granted are prudent in amount, and that the signatures on the loans and discounts are genuine. Particular attention should be given to paper not paid at maturity, called overdue, in order to collect it or make it secure. Each note, when discounted, should be numbered sequentially, to give it an individuality, and recorded by the discount clerk in a register giving proper details as to makers, indorsers, collateral security, and date of maturity. Usually loans granted by national banks are made on promissory notes signed by one party and indorsed by another, called two-name paper, or on notes made by one party secured by collateral of stocks or bonds made payable to bank by assignment. Sometimes loans are made on notes made by one party without security of indorsement or collateral; this is called single-name paper. A list of all loans and discounts, arranged according to the dates when they fall due, should be kept in a book called "discount tickler," from which notices reminding borrowers when to pay are sent out, and the payment or non-payment of notes at maturity can be conveniently seen. To a large extent national banks collect notes and drafts belonging to their customers, and the same bookkeeping and care should be applied to these as to those which belong to the bank.

EXCHANGE

An important branch of business is the buying of checks and drafts on banks or individuals in other places, and the selling of checks on other banks, called buying and selling exchange. The blank checks are either bound in book form, with stubs sequentially numbered, or put up in pads without stubs, with a book sequentially numbered in place of stubs for recording amount, date, etc. The exchange bought is forwarded by mail for collection to other banks, upon which the bank remitting them draws exchange. For each such correspondent bank an account must be kept by the bank in a ledger showing amounts remitted in one column, amounts drawn in another, and the balance due in a third.

CLEARING-HOUSE

Where there are several banks in one place, there is usually a very important and labor-saving arrangement between them called the "clearing-house." Each bank usually receives on deposit or for collection checks or drafts drawn on its neighbors, and the clearing-house is a plan for a representative from each bank to meet every day at a stated hour and convenient place to make a mutual exchange of checks, paying only the balance due from or to each other in money. This accomplishes an immense saving of actual currency. As an illustration, the clearing-house banks in New York city in 1897 exchanged checks amounting to over $31,000,000,000 by paying balances aggregating less than $2,000,000,000, or only about 6 per cent., in actual money.

GENERAL LEDGER

The book in which a general summary of the bank's business is kept is called the general ledger, with accounts showing all transactions in capital stock, profits, deposits due to individuals and banks, circulating notes, etc., all of which represent "liabilities," or what the bank owes; and such accounts as loans and discounts, United States bonds, amounts due from other banks, and cash, which represent "resources" or "assets," or what a bank owns. A balance of the accounts on this ledger should be a true statement of the bank's resources and liabilities, and show at a glance its actual condition, provided all the books and accounts are honestly and accurately kept.

QUALIFICATION AND TRAINING OF A BANK ACCOUNTANT

The constant verification of all these accounts is a most important branch of bank administration, and this suggests a discussion of the second branch of the subject, viz., the qualifications and training of a bank accountant. The essential qualification of any expert accountant is the natural capacity to understand the meaning of figures. The accountant is born, not made, for the ability to understand figures is as much a natural talent as that for music, painting, or any other of the fine arts.

The best training school for a bank accountant is practical experience in all the departments of bank work and bookkeeping, and the clerk who soonest wins success in a bank or any other field is he who, not content to know thoroly only his own duties, is eager to know all he can learn of the duties in all other departments. But the bank accountant who has mastered a knowledge of the work and bookkeeping of the tellers, the individual bookkeeper, the discount clerk, the exchange clerk, and the general bookkeeper, still has some important things to learn. And these are how to discover the methods by which books and accounts may be falsified to conceal dishonest acts. A good bank accountant should be able to make a thoro examination of the affairs of a bank, and in doing this he should take nothing for granted. In the teller's department every dollar should be actually counted and examined, and every check and memorandum carefully scrutinized to ascertain that signatures are genuine and that the items represent cash value. The only complete proof of the correctness of the individual ledger will be the actual comparison of depositors' pass-books with the ledger accounts to see if the figures on both correspond. Thru falsification of depositors' accounts on the individual ledger the bookkeeper, with the aid of a confederate outside, has frequently been able to commit robbery amounting in some cases to hundreds of thousands of dollars. Robbery has also been committed thru falsification of accounts with correspondent banks, which can be detected only by careful comparison of a transcript of all entries on the books of the correspondent bank with the books of the bank, called reconcilement of accounts. In examining loans and discounts, the accountant must see that the signatures of makers and indorsers are genuine, and that the aggregate of all items agrees with the balance of loans and discounts on the general ledger. He must also examine and verify all stocks, bonds, and other collaterals held as security. When interest on loans is not entered until notes mature, defalcations have occurred where the discount clerk has collected the correct amounts, but entered smaller amounts on the bank's books, appropriating the difference to his own use. In general, the aim of the expert bank accountant should be to find whether the bank's statement of resources and liabilities taken from its general ledger represents the truth, and to do this he must have the capacity to look into every nook and corner of the bank's business and unearth any fraud which may have been covered up.

In conclusion, successful administration depends upon the ability of bank directors to guard against dishonesty and incompetency from two directions.

On the outside of the bank they must be vigilant to see that the funds of the bank are so loaned or invested that they will be repaid with interest, otherwise loss of profit, and even of capital, will result; and on the inside of the bank they must take such precautions that acts of dishonesty cannot be committed. This can be accomplished only by carefully inquiring into the reputation of every employee before engaging him, and by having the work of every employee checked or verified by someone else; this precaution is really a moral duty bank managers owe to their employees.

After all, the success of the bank manager, the bank accountant, and of the bank's customers and employees as well, will depend upon the intelligence, the energy, and the honesty contributed by each and all to the general result. In its last analysis it is a matter of good character—the best capital any business man may possess on earth and the only treasure he can possibly have with him in heaven.

THE BOOKKEEPING AND ACCOUNTING OF THE PERIODICAL PUBLISHING BUSINESS

BY A. O. KITTREDGE, EDITOR OF "ACCOUNTICS," NEW YORK CITY

My subject divides into two parts, bookkeeping and accounting. These terms are often used to designate the same thing, but in the correct meaning of the words they indicate two separate and distinct functions. Accounting is an element of business, whereas bookkeeping is simply the art of recording the transactions of business. The records of every business, to be accurate, must have at their foundation a scientific accounting basis. Upon this the bookkeeping system is to be constructed, but unless it is so fashioned as to show results in the best form suited for stating the condition of the business from time to time, it will fail of the greatest possible usefulness. The ideal statement of business conditions is the "going balance sheet," and to that we shall lead up. The business under consideration is designated as the periodical publishing business. If I were to be limited to a consideration of the publishing business, which ordinarily means the manufacture and sale of bound books, there would have been ruled out of this discussion some matters which I venture to believe will be interesting to you. A very considerable number of those engaged in publishing periodicals own or control their printing plant. In addition to doing their own typesetting, presswork, and binding, they do job work for the public. We then have in the business before us manufacturing, publishing, and merchandising. It is a manufacturing business that sells part of its product in the general market, and delivers another part of its product to one of its departments, namely, the periodical department. The latter distributes the goods thus taken over on the subscription plan, with some payments received in advance of service; for example, prepaid subscriptions, and some collected after partial or complete delivery of the goods. Its current receipts, therefore, do not necessarily correspond with its output; or, to state it otherwise, its revenue and earnings are always different quantities. From what is so far before us it is very evident that a single account of the general character of that usually called the merchandise account would be wholly inadequate for this business. With it alone to depend upon, no matter how correctly the personal and general property accounts might be kept, the loss and the gain results of the business, other than that embraced in a statement in gross at the end of a fiscal period, would be entirely lacking. It is not enough today to know that the business, taken as a whole, is making money. It is demanded of the accountant to show just where money is being made and how much, and just where losses are occurring and their rate. It has long appeared to me as if there had been a mistake made by someone in the early days of the literature in English of double-entry bookkeeping, and that those writers who have come after have failed to detect the mistakes of their predecessors. Consider for a moment, if you please, the merchandise account as one of the several property accounts which double entry recognizes. It is peculiar among the ordinary property accounts that it is made up of two sets of values. There are cost prices on the one side and selling prices on the other. Its balance is a mixed quantity. Compare it with bills receivable or with cash, which are of a similar nature. In each of them the same values appear on both sides of the account. Accordingly, the balance in each of these accounts shows the amount of the property on hand. Not so, however, with merchandise. Its balance is an amount which represents goods on hand minus the profit made on what has been sold, or an amount consisting of the sum of the goods on hand plus the loss that has been made on what has been sold. This is very confusing, and it becomes still more so when expense items are taken into consideration. At the beginning of the fiscal period we debit the account with the inventory at cost prices. Next we debit the account with the goods we buy at cost prices. The third step is to credit the account with the goods parted with at selling prices. Some of the goods that we have bought are unsatisfactory to us, and we return them. Merchandise must be credited with them at the cost value. Some of our customers return part of the goods which we have sold. Now merchandise must be debited, and at the selling price. We, therefore, have selling prices and cost prices mixed on both sides of the account. If there is a manufacturing department in the business, the merchandise account is debited, in addition to what we have described, with the cost of the materials bought, with the amounts paid out for labor, with the salaries of the superintendent and general manager, with insurance, taxes, and all the other expenses of manufacture. What bookkeeper can tell from the amount appearing as the balance of merchandise account what it really represents? It is, therefore, very evident that two or more accounts should have been placed where merchandise stands alone at present.

BUSINESS EDUCATION IN THE STATE OF NEW YORK

BY I. O. CRISSY, EXAMINER OF BUSINESS SCHOOLS FOR THE STATE OF NEW YORK

I am to speak to you this afternoon on "Business Education in the State of New York," but my remarks will be devoted almost entirely to the attitude and the hopes of the University of the State of New York, which I am here to represent. The University of the State of New York—better known, perhaps, by its older title, Board of Regents—is a supervising and examining and, to a certain extent, legislating body for the institutions of higher education in the state, but is not itself a teaching institution. Its great function is to promote and encourage higher education along all lines, and it is the administrative arm in carrying out all enactments dealing with higher education. Some very sweeping reforms in the matter of preliminary requirements for professional education have been made within the past few years. It is not necessary to dwell upon the tremendous impulse that has come to secondary and higher education in the state of New York as a result of these beneficent laws, or upon the inestimable advantages that have grown out of them. These are so self-evident as to need no elucidation. By chap. 312 of the Laws of New York of 1896 the business of accounting was in that state raised to the dignity of a profession, with a title for those who qualify which carries with it all the force and honor of a degree. The law provides that a citizen of the United States over twenty-one years of age, of good moral character, and who is a resident of the state, or has a place for the regular transaction of business therein, shall, on due certification of his qualifications by the regents of the university, be known and styled as a certified public accountant, and that this title shall not be used by any other person. The law empowers the university to make rules for the examination of candidates for the title of C.P.A., and to appoint a board of three examiners who are required to be certified public accountants. The university rules require that the candidate shall have received a preliminary education equivalent to a full four-year course in a registered high school; that he shall have had five years' experience in the study or practice of accounting, and that he shall pass satisfactory test examinations in the following subjects: theory of accounts, practical accounting, auditing, commercial law. Examinations are offered in June and December of each year in New York and three other cities of the state. Questions in all the papers are framed to cover some of the most difficult problems of the subject under examination, and the candidate who obtains the honor of writing C.P.A. after his name must needs have a clear knowledge of the subjects involved. The state of New York has thus placed itself abreast of England and the more advanced continental countries of Europe in recognizing accounting as a learned profession, and it is believed that many other states will speedily follow her example.

Two years ago a committee representing the leading business schools of the state was appointed to confer with a committee of the university with a view to securing state recognition of business education by providing for registration in the university of such business schools as were found worthy of the confidence of the community and able to meet certain stated requirements. For the purpose of encouraging a higher standard of business education and securing a uniform test therein, it was voted by the regents that a state business diploma should be offered by the university, which should have as its basis graduation from the high school, supplemented by a full course in a registered business school. It was at first the sense of the conference committee that the minimum requirements for registering a business school should be six competent teachers giving their full time to the work, a course of study for the state business diploma of not less than two years or one thousand hours of actual instruction, and a school equipment of not less than $5,000 in value, exclusive of building and heating and lighting apparatus. On further conference, however, it was decided to reduce the minimum length of the course to one year or five hundred hours of actual instruction. An inspection of the business schools, of which there are something over seventy in the state, was begun in April of the present year. It was soon evident to the inspector that there were schools located in smaller towns which could not meet the requirements as to the number of instructors and value of equipment, but which were giving as efficient instruction and turning out as good work as the best in the state. In view of these conditions, it was determined by the university to grant to such schools provisional registration, which gives them all the privileges and the standing educationally that regular registration implies. This action is strictly in accord with the settled policy of the university, which is not only to elevate the standard of education in the state so far as possible, but also to foster and promote such education under all circumstances.

The fixing of a minimum does not by any means prevent any school from making its course as much longer as may seem necessary, and, as a matter of fact, the actual length of the course will doubtless depend upon the individual judgment of the manager of each school as to how much instruction is necessary to meet the requirements of the examinations for the state business diploma, for which a provisional syllabus was published last spring. In the preparation of this provisional syllabus the university has drawn very largely upon the excellent and able report of your Committee of Nine, and has adopted many of the recommendations of the report entire, for which valuable aid I most cordially tender to the committee the acknowledgment and thanks of the university. It is frankly admitted that the matter of the length of the course is still in a tentative stage. The examinations cover the following subjects: bookkeeping, intended as a competent test of both theory and practice; commercial arithmetic, commercial law, commercial geography, and history of commerce. This examination, in so far as it relates to law, demands a knowledge such as every business man should possess of the laws that regulate ordinary relations of life. As to commercial geography, it demands a general knowledge of the geography of the world in its relations to commerce, and this naturally includes a general knowledge of the leading products, leading industries, leading commercial cities, and the more important commercial routes, while in respect to our own country a more intimate knowledge of these matters will be required. In commercial history the candidates should have clearly defined ideas as to how commerce originated, how and why it grew, and what discoveries, inventions, or laws have specially affected it. Business and office methods: this examination—somewhat vague, perhaps, in title—is designed as a test in those minor, but very important, matters which, I believe, are taught in all good business schools, altho not given so much attention in text-books. English: this test does not deal at all with the technicalities of grammar; it is simply a practical exercise in English composition along such lines as confront the man of business daily. I say most cordially, on behalf of the university, that it asks for these examinations and for the criticism and suggestions of educators and accountants, and that the question papers will be sent on application. A state stenographer's diploma, entirely independent of the business diploma, will be granted to graduates of registered schools holding regents' pass cards in the 125-word test in stenography and in the English prescribed for the business diploma, on passing the examination in typewriting and office methods prescribed by the syllabus.

But what will the University of the State of New York accomplish by this new departure? The answer rests very largely with the business schools of the state. First of all, there will be established a uniform credential by which business education can be measured. Second, it will elevate the dignity of the business school by the mere fact of the institution having been found worthy of registration in the university, the state conservator of higher education. Third, it will be a protection to the public. The system of registration will sound the death knell of the fake school in the state of New York. The disappearance of the fake school will be speedily followed by the disappearance of the highly lurid literature for which the so-called business college has earned such brilliant laurels.

Finally, the gain in better general education will be great. The business schools will strive to elevate their own standards. They will not be satisfied with turning out good bookkeepers, good railway clerks, and good stenographers, noble as is that work, but they will aspire to turn out also broadly educated and thoroly equipped and polished business men and women.

THE DUTIES AND QUALIFICATIONS OF THE CONGRESSIONAL REPORTER

BY DAVID WOLFE BROWN, OFFICIAL REPORTER, UNITED STATES HOUSE OF REPRESENTATIVES

To conceive vividly the duties and qualifications of the congressional reporter, one must conceive vividly his environment. Let us take a glance at the scene of his daily labors.

THE PERSONAL MAKE-UP OF CONGRESS

What a heterogeneous body in its personal make-up is the American House of Representatives! Here are 360 members and delegates, each of whom is more or less a representative of the peculiar manners, speech, sentiments, ideas, of the section of country from which he comes. Here are lawyers, doctors, ministers, merchants, clergymen, teachers, bankers, railroad men, farmers, mechanics — in fact, men from every avenue of life. The topics which engage the attention of the house are treated by each of these men in his own unique way, with his own peculiar modes of thought, his own characteristic tones and words.

RANGE OF CONGRESSIONAL TOPICS

And how vast the range of these topics! Glance at the list of congressional committees, with the designation of the subjects intrusted to them: measures of finance; tariff bills, bringing up ever and anon that interminable controversy between free trade and protection; measures of internal-revenue taxation, affecting the various manufacturing and economic interests of the whole country; changes of the statute law in all its various departments, and at times amendments of that great fundamental law, the constitution of the United States; questions involving the relations, peaceful or warlike, of our own country and foreign nations; the organization and reinforcement of our land and naval forces; the manufacture of artillery and small arms; the building of war vessels; national bank legislation; bankruptcy laws; internal improvements in all parts of the country, with the discussion of the local and peculiar needs of hundreds of rivers and harbors; Indian affairs, with the strange-sounding and almost unpronounceable names of various aboriginal tribes; all the various questions affecting the postal service, such as the free-delivery system, the subsidized railway service, the pneumatic-tube transmission of letters, etc. And then commerce in all its ramifications, interstate and foreign; immigration and naturalization; civil-service reform; pensions, with the discussion of the wars out of which the pensions arose; the law of copyrights and patents, etc., etc. — I must take refuge in "etc.," for why should I try to enumerate subjects which are innumerable? Is there, indeed, any topic of "contemporaneous human interest" that may not become the theme of the representative's voice, and therefore the theme of the reporter's pen?

HOW BUSINESS IS DONE

And how are these subjects discussed? Not in dry, prolix essays, such as might be read from a college professor's desk, but generally in that direct, business-like, unceremonious way which might be expected from representatives of a practical, plain-dealing people. The theoretical ideal of a legislative body is an assemblage whose members, unless engaged in voting, or in making formal and stately speeches, sit mute at their desks hour after hour, listening with more than the patience of martyrs to the reading of bills or amendments and the utterance of long-winded harangues. But the American House of Representatives does not in practice conform — indeed, no body of wide-awake, bustling Americans can be made to conform — to any such schoolboy routine. If the member who "holds the floor" or the subject which he discusses does not interest his fellow-members, no human power can compel them to listen, or even to sit silent. When, on the other hand, they are eager to hear, this eagerness cannot be thwarted; and if from any cause (inaudible utterance, bad acoustic arrangements, or anything else) they cannot hear at their desks, they will inevitably drift to some other point in the hall where they can hear; and from that point (tho huddled together till they present somewhat the aspect of a "mob") they cannot be driven, except for a few moments, even by the stern announcement of the chair (emphasized by the hammering of the gavel): "The house will come to order, and members will resume their seats."

DISORDER IS A NORMAL CONDITION

Necessarily a body like this is, from the ordinary point of view, disorderly. Sometimes it is disorderly because the question before the house arouses no general interest, and hence the buzz of private conversation competes with the monotonous reading of bills and amendments, or the delivery of dull speeches. At other times the body is disorderly, not from lack of interest in the proceedings, but because interest is intense; for intense interest is very rarely an absolutely silent interest. At times this body is more than disorderly; it is turbulent. Now and again partisan or personal questions stir it to fever heat. Some anger-kindling word or phrase is flung from one side to the other. Perhaps one infuriated member gives another "the lie direct." A hundred men are instantly on their feet. Thirty or forty excited representatives are shouting at once. The parliamentary gladiators of the contending sides indulge in the bitterest reproaches and retorts. And sometimes the battle is more than a battle of words. Frequently the parliamentary storm is too fierce to be quelled by the voice of the presiding officer. Indeed, his voice is scarcely audible amid the uproar. To allay the tumult, the sergeant-at-arms is appealed to, and, bearing that symbol of the house's authority, the mace (only a symbol at present, but a potent one), he rushes into the melee; and order is once more restored.

This body, with its heterogeneous membership, its marvelous range of subjects, its varied styles of expression and modes of thought, its habitually informal and even disorderly methods of doing business, its occasional scenes of turbulence, is the body whose proceedings the congressional reporter is expected to take down with flawless accuracy. The difficulties of the task stand out in bold relief and need no coloring.

STENOGRAPHIC DIFFICULTIES

First, there are the difficulties purely stenographic. As to mere rapidity of utterance, it is but reasonable to expect that some of the speediest speakers from different parts of the union should find their way — as in fact they do — to the national councils. But the set speech, rapidly spoken tho it may be, is not the touchstone of the congressional reporter's stenographic skill. A severer test comes in the earnest and often excited colloquies, as rapid as the most rapid colloquies of the courtroom, but more perplexing, because these congressional colloquies are not merely between lawyer and witness, but are participated in by perhaps a dozen eager and possibly angry disputants speaking from scattered parts of the hall.

DIFFICULTIES OF HEARING

The congressional reporter's peculiar difficulties of hearing you have already surmised. The confusion on the floor of the house is often so great that not only are visitors in the gallery bewildered, but one member after another, often in quick succession, rises to appeal to the speaker for "order," on the ground that "it is impossible to understand what is going on." There is no one place in the hall, not even the speaker's chair, from which the debates and proceedings can at all times be clearly understood. How, then, does the official reporter meet and overcome the difficulty of hearing? He does it only by perambulating the floor of the house, notebook in hand, writing as he walks or stands — seeking always to get as near as possible to the debaters, and for this purpose standing often in an aisle, or possibly dropping into some absent member's seat; but never, when on duty, lingering for even a moment at "the reporter's desk" — called so perhaps in irony, because no reporter ever sits there when actually reporting.

Such are the difficulties of hearing when comparative quiet prevails; the difficulties are aggravated a hundred fold amid scenes of turbulence such as I have described. On these occasions, when the legislative storm is raging most fiercely, accurate note-taking is, of course, more difficult than at any other time, and yet more necessary; for, in the midst of the storm, some clarion voice, rising above the din, rings out the words, "Mr. Speaker, I call the gentleman to order and demand that his words be taken down," whereupon the reporter must instantly reproduce from his notes the stinging words just uttered in this almost pandemonium.

Reports taken under these most trying circumstances must, without opportunity for pottering or pondering, go at once into cold print, where they are subject to correction in the presence of the house, which means in the presence of the country. The lawyer may bury his mistakes in the musty records of the courtroom ; the physician may bury his beneath the memorial tablets of the graveyard ; the congressional reporter's errors meet him face to face in the *Congressional Record,* with no merciful "recording angel" to "drop a tear" upon the erroneous word or phrase and "blot it out forever."

AN "UNTOUCHED" PHOTOGRAPH

To make matters worse, absolute stenographic accuracy may be to certain speakers as unwelcome as an "untouched" photograph to a person who sits for his picture. The report may be, not incorrect, but too faithfully and painfully true. Said a distinguished member once to the official reporters: "Gentlemen, I do not doubt your accuracy ; I dread it."

THE FACULTY OF ACCURACY

If I must undertake to specify, even in a general way, the qualifications of a congressional reporter, let me say, in the first place, that one thing which any reporter, and most decidedly the congressional reporter, requires is the desire and capacity to be exact about apparently small matters. This conscientious ambition to do even little things as well as they can be done — to make no slip that the most scrupulous care can avoid — constitutes what I call "the faculty of accuracy," a faculty absolutely indispensable to the successful reporter. Under the prompting of this faculty, a thoroly accomplished stenographer begrudges no pains to get with implicit correctness names, quotations, references, etc., not trusting merely to what his notebook tells him, but verifying his notes, if the occasion requires and allows it, by resort to books of reference or personal inquiry. Mere guess work never satisfies him. Nor does he content himself with the remark: "Well, I guess that is near enough." For him nothing is "near enough" that is not exactly the thing. In the stenographic student no characteristic can give better assurance of final success than the determination to be faultlessly correct at any cost.

ALERTNESS, ENDURANCE, AND "NERVE"

The congressional reporter should possess, as should all his fellows in the profession, a peculiar combination of mental and manual alertness. It has been remarked of shorthand reporting that "no other proceeding so imperatively demands instantaneous mental comprehension with instantaneous manual execution." Agile fingers play their part in the work, yet it is absolutely true that to write quickly one must think quickly. I believe there are many persons (some of them aspiring to be rapid stenographers) who are unable to carry spoken language thru their minds, with clear apprehension of its meaning, at so high a rate as two hundred words a minute. I do not say that this deficiency is incurable by study and practice, but it is a deficiency which cannot be removed by mere training of the hand or mere shorthand "cramming."

The reporter imperatively needs large powers of mental and physical endurance. To carry him successfully thru the wearying and worrying tasks of his profession, he requires a sound constitution of body and mind, with habits of temperance and moderation. More than this, if he hopes to be equal to every emergency of his profession, he should be a man of nerve. Difficulties and dangers which make some men lose their heads rouse others to excel their ordinary selves. The man who, under trying circumstances, is not confused and abashed, but stimulated and emboldened, is said to have nerve; and this is the sort of nerve which largely helps to make a successful reporter. Especially is it needed on that fierce battlefield, the floor of the House of Representatives. When members lose their heads, all the more reason is there that the reporter should keep cool, with every faculty alert, that he may prove himself master of the occasion.

KNOWLEDGE OF LAW INDISPENSABLE

The congressional reporter should have pre-eminently and specifically a knowledge of law. The prime business of the body in which he reports is the making of laws. Its discussions turn upon the law as it has been or is, in order to determine what it should be. Legal rules and maxims are glibly quoted. The principles of the common law are constantly brought in review. A frequent topic, too, is that fundamental law, the constitution of the United States — the construction of its various provisions, with their nice qualifications, limitations, and exceptions. How blindly and stumblingly must the reporter grope his way thru these discussions, if his mind has not been enlightened by the study of common law, statute law, constitutional law!

More than this, he should be an adept in parliamentary law. Nice parliamentary points are topics of daily debate. Shrewd parliamentary tactics are the weapons in many a legislative battle. In a body like Congress there arise from day to day, almost from hour to hour, crises in which the reporter, unless versed in parliamentary law, must find himself hopelessly at sea.

THE REPORTER'S GENERAL EDUCATION

As to general education, the reporter should possess such a liberal fund of useful information as can come only from a natural love of reading exercised over the broad field of English literature. "What should I study in order to prepare myself as a reporter?" was asked by an ambitious student of a veteran stenographer. "Everything," was the concise, but somewhat discouraging, reply. The absolutely perfect reporter, if the ideal could be realized in mortal flesh and blood, would be a walking, breathing encyclopædia.

Need I say that the congressional reporter cannot satisfactorily do his work without a good knowledge of history, especially English and American, and more particularly the history of American politics? And he must by no means fail to familiarize himself with that text-book of current, everyday history, the daily newspaper. If he be not well read on everyday topics, his ignorance will often betray him into sad blunders.

Some acquaintance, not necessarily profound, with other languages than his own, especially Latin and French, can hardly be dispensed with.

LITERARY SKILL

A reporter should be able to write his mother-tongue, not only with correctness, but with literary skill; and to attain this he will find it necessary, not merely to study the formal rules of grammar and rhetoric, but to learn the language from its concrete illustrations in the writings of those whom the world recognizes as masters of English style. But it may be asked: " Is it not the business of the reporter to take down and transcribe just what he hears; and, if he faithfully does this, can more be asked or expected?" Yes, more is asked and expected — reasonably asked and expected. The reporter is not, and cannot be, a machine• Without breadth of education and intelligence he cannot understand what he writes. Unable without such understanding to attain even verbal accuracy, he must inevitably write a great deal of nonsense.

"TOUCHING UP" A REPORT

But suppose the reporter's notebook shows every word faithfully recorded. Mere word-taking, however successful, cannot suffice to fill the measure of the best reporter's qualifications. There may be a place in the reporting profession (but it cannot be a high one) for men whose sole aim is to take down exactly what is said and to write it out without varying a jot or tittle from the uttered words; but any stenographer who would make creditable reports of public speeches — creditable to himself and the speakers — must do more than this. The manual skill necessary to take down every uttered word cannot be dispensed with; but when the exact language has been photographed upon the pages of his notebook, the reporter must know how to " touch up " the photograph. He must not subject himself to such a complaint as that sturdy old Scotchman, Thomas Carlyle, makes against the men who have preserved for us the speeches of Oliver Cromwell. "The reporters of those days," says Carlyle, "seem to have been singularly candid, and to have given the printer precisely what they found on their notebooks."

There are two kinds of reporting, literal and literary. An absolutely verbatim report — one to which the reporter has not by means of his own education and taste imparted literary finish at points where literary finish was needed — is not a good report, and will not be accepted as such even by the man who made the speech. How far the "touching up" of the stenographic photograph should extend is a question that I cannot now go into at length; but surely an accomplished stenographer, in transcribing his notes, should be able to correct a slip of the tongue, a misquotation, an error of grammar, a mixed metaphor—faults scarcely avoidable by even good speakers, when speaking extempore. Nor is it too much to expect that the reporter should be able to exscind surplusage or rearrange the clauses of a sentence so as to bring out the sense more clearly.

IS THE STANDARD TOO HIGH?

In defining the qualifications of a congressional reporter, have I prescribed too high a standard? Human nature being, after all, only human nature, it may be confessed that the ambitious aspirant to high reporting skill, like other aspirants to professional eminence, must often content himself with an approximate attainment of his ideal. And even the semblance of these qualifications, even a working substitute for them, cannot be acquired in a short time. Years, not months, of general and special education are needed. Indeed, the education of the reporter, like the education of any other professional man, is never completed.

THE CONGRESSIONAL REPORTER'S REWARD

For all this elaborateness of preparation, this anxious discharge of responsible and exacting duty, what is the congressional reporter's reward? First, a secure and honored place in an honorable profession, with recognition from intelligent minds of the talent and toil that the holding of the place implies. Second, an opportunity for personal association (as close and intimate almost as one may choose to make it) with some of the picked men of the nation. Third, the breathing, as daily work goes on, of a clear, expanded, stimulating intellectual atmosphere. Work that brings one constantly in contact with topics of the highest import, handled by some of the brightest men of the country, cannot become mere drudgery. Fourth, the congressional reporter has the advantage of seeing enacted from day to day some of the most interesting dramas of real life. In this legislative theater, the play, serious or facetious by turns, involves themes of intensest human interest. The actors are three or four hundred men in whom human nature is throbbing and thrilling with far more than the warmth and intensity of the mimic stage. The complications of this drama bring into action almost every human faculty and passion. There is no monotony; for each day has its new incidents, as fresh and unique as bubbling, wide-awake human nature can make them. Fifth, the daily work of the congressional reporter is a never-ending education. Would that I had better improved the advantages of this academy in which I have been a pupil!

DEPARTMENT OF CHILD STUDY

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY, JULY 11, 1898

The Department of Child Study met in the Foundry Church at 3 P. M. In opening the meeting the president, M. V. O'Shea, Madison, Wis., introduced Miss Edith C. Westcott, chairman of the local committee, who welcomed the department, inviting the members to a garden party given at Belmont, the home of Mrs. A. L. Barber, in behalf of this society. The president followed with introductory remarks.

Professor C. H. Thurber, of the University of Chicago, being absent on account of sickness, a request was made that his paper on "The Reading of Children in the Adolescent Period" be published in the proceedings of the National Educational Association.

Ossian H. Lang, editor of the *School Journal*, New York city, read a paper on "Some Cautions to be Observed in Child Study."

"A Year's Study of the Entering Pupils of the Springfield, Mass., High School" was presented by Fred W. Atkinson, principal of the High School, Springfield, Mass.

Edgar James Swift, Normal School, Stevens' Point, Wis., presented a paper on "Heredity and Environment — a Study in Adolescence."

Charles H. Keyes, principal of the High School, Holyoke, Mass., discussed the paper of Ossian H. Lang. H. L. Tolman, College of Physicians and Surgeons, Chicago, Ill., spoke upon the paper of Principal Atkinson.

The president announced the nominating committee as follows:

E. A. Kirkpatrick, Fitchburg, Mass.
George Griffith, Utica, N. Y.
H. E. Kratz, Sioux City, Ia.

Meeting adjourned until Tuesday, 2 P. M.

SECOND SESSION.—TUESDAY, JULY 12

The second session of the Child-Study Department convened at 3 P. M., the president, M. V. O'Shea, in the chair.

A paper entitled "The Influence of the Weather upon the Activities of Children" was presented by Edwin G. Dexter, Normal School, Greeley, Colo.

An address on "The Rearing of Children from an Experimental Standpoint" was given by Dr. Elmer Gates, Laboratory of Psychology and Psychurgy, Chevy Chase, Md.

John G. Thompson, principal of the Normal School, Fitchburg, Mass., read a paper on "Child Study in the Training of Teachers."

Will S. Monroe, Normal School, Westfield, Mass., read a paper on "The Development of the Social Consciousness in Children."

Brief discussions followed the above papers, at the close of which the nominating committee presented the following report:

Your Committee on Nominations begs leave to submit the following report:

For *President*—Will S. Monroe, Westfield, Mass.

For *Vice-President*—Reuben Post Halleck, Louisville, Ky.
For *Secretary*—Mrs. Alice W. Cooley, Minneapolis, Minn.

Respectfully submitted,
E. A. Kirkpatrick,
George Griffith,
H. E. Kratz,
Committee.

The report was accepted and the above officers duly elected for the ensuing year. The meeting then adjourned.

G. W. A. Luckey,
Secretary.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

BY PROFESSOR M. V. O'SHEA, UNIVERSITY OF WISCONSIN

At the opening of this, our sixth session, ladies and gentlemen, it may be well to recall that, when we were last together, there were many who were inquiring whether the phenomenal enthusiasm in the study of childhood had not reached its climax, and whether we had not already entered upon an era of conservatism, or even of reaction. In view of these remembrances it is appropriate to say that during the past year there have been manifest unusual interest and activity in child study; and not more interest in the study of children than in the devotion to their needs, when these are once discovered. Child study has been thought by many to refer wholly to the scientific investigation of the characteristics of child life. Such people regard it as an intellectual movement merely. But in a far more important sense it stands for a rich, emotional attitude toward children, a consecration to their care and culture in the schoolroom or elsewhere.

Since our last meeting several vigorous state associations have been added to the remarkably large number already in existence. Teachers' gatherings everywhere have been thought to be incomplete without papers and discussions upon this subject. The press, secular and professional, has given unusual space to the discussion of matters concerning the development of the child and the mode of properly training him. Most significant of all has been the consideration which child study has received in women's organizations; and when we consider that these organizations are increasing very rapidly, and that women are appreciating that the most important field of usefulness for them relates to the training and care of childhood — more important than temperance or politics, or, one might almost say, than religion, since it includes the latter—in view of these things we see how great is the future of the work for which we stand—the sympathetic, affectionate study of childhood in all of its phases, and the most perfect devotion to its needs in every relation of life.

But we have not been without our critics during the past year. There have been those who occupy high places who have been calling out to teachers in loud voices warning them against the dangers of child study and prophesying its early doom. But we may find consolation in the fact that the world is full of the echoings of warnings from those who always see in progress elements of danger, and who feel that a power which they are not directing cannot have real substantial merit. There has never been any great reform movement in the history of mankind which has not at the outset met with criticism and accusation by those who are so constituted that they never dare to depart from the beaten tracks. But such criticism has its place in the evolution of the race, since it tends to prevent excesses, and so we should welcome it, especially if it be offered in a candid spirit.

One of the most prominent of our critics has sounded the alarm to the teachers over the country, assuring them that the study of the child will make them cold and indifferent; that no teacher may be successful who regards her children in the light of objects to be studied scientifically; that child study is making statisticians of those in the schoolroom and not true instructors of childhood. If this indictment were true, it would certainly be a serious and a merited one. But teachers are not thus occupying themselves in their schoolrooms. They are not in any great measure filling out syllabi, or measuring and weighing their children, or probing them with all sorts of irrelevant questions. The child-study movement has not at all encouraged this sort of thing, altho it would be strange if on the fringes there were not to be found ravelings. Every normal activity has some abnormal aspects; but we are not to allow these to become so magnified that they entirely obscure the true form and figure of the thing itself. What teachers are doing, in so far as they are responding to the present interest in the study of child life, is to familiarize themselves with the results of scientific studies, and then seeking to apply these in the concrete experiences of the classroom.

And can it be gainsaid that this is a most important work for the teacher whose mission it is to benefit to the greatest degree possible every individual life under her care? It should be thoroly recognized that the teacher is primarily a gardener, not a scientist. She must nurture and direct the lives of the children committed to her care, and she may not be at all concerned with elaborating a science of child growth, except as this will make her more skillful, more influential, in shaping aright the destiny of each individual in her charge. While the teacher, then, cannot become a scientist in the sense that she will strive to contribute to the science of human growth, yet she must take the results which are reached by such scientific studies and observe them to the greatest degree possible in all the work of her schoolroom.

But there are those who feel that even this is unnecessary for the teacher, and that she would be more truly successful if she consulted only her common sense, her uncultivated instincts, in all of the emergencies which arise in the tuition of childhood. In these days instinct is being magnified to such great proportions that it is esteemed by many to be the safest guide to conduct in any and all situations. But if instinct were the wisest counselor for those who direct the lives of childhood, then we should indeed have our best teachers and parents among the most ignorant of our people, whom nature and not tuition has instructed, and so in whom instinct is the guide of life. Without minimizing the value of the natural instincts of affection and devotion to childhood, yet it needs to be appreciated that special study of child life only serves to increase, to make richer and more comprehensive, one's affections and more loyal his devotion. Ignorance in any of the concerns of life breeds indifference; it leaves the heart cold and the sentiments callous, while knowledge arouses dormant emotions and makes keener and truer those which are already active. Ignorance of nature does not beget a love for nature, nor does ignorance of the marvelous processes of growth in child life cultivate richer sympathies for the needs of childhood; but rather, the more one knows of childhood, the more wonderful and beautiful it all appears, and the greater are the mysteries which are seen to lie entombed in every child's life. Such knowledge awakens a true love for children, and vitalizes the native instinct to sacrifice one's self-interest for the well-being of the child.

As I see the situation, I apprehend that there is far greater danger from stagnation and indifference regarding childhood than from over-enthusiasm in the child-study movement. I am not fearful that the great enthusiasm which is being manifested everywhere will have any other effect than to make teachers more considerate toward children, more skillful in dealing with both the normal and the abnormal, the perfect and the imperfect, more sympathetic and patient and affectionate; and, best of all, it will bind the teacher to the pupil and the pupil to the teacher in bonds of sympathy so close as to make the work of the schoolroom full of joy and pleasure.

Of course, there are excesses which result from over-enthusiasm and false hopes that follow after too great confidence in what is merely transient or speculative. But we are not to condemn the spirit itself because of the things which get attached to it. We are not to feel discouraged because we cannot control all of the factors which are at work in this movement; but, rather, we are to have confidence that, by keeping the ship headed in the right direction and moving with the right momentum, we shall in plenty season reach port in safety.

There is another sort of criticism of child study, which charges it with being merely a fad which will pass out of view rapidly. Such criticism proceeds from those who regard child study as limited to the filling out of blanks and things of that sort. But this is the most unimportant part of the work. It is a mere incident. It would be well if we could secure a term for this movement which would indicate on every occasion that it related to the subject of human development, in its broadest aspects and in all of its phases; and that data are derived for this science from various lines of investigation that are concerned with growth in any form. Thus evolution, biology, anthropology, neurology, and other sciences are contributing vast amounts of information that are being assimilated into a science of developmental psychology and hygiene. Child study should not only proceed in its own special way, but it must go to every allied science and find out what it yields that may advance our knowledge of human growth. And what is garnered from these various fields must be wrought into a harmonious whole that will alike describe the route which a child follows in his progress from birth to maturity, and teach us how best to aid him in his journey.

Regarded in this light, child study is not only not a fad, but it is rather just at the beginning of a career which shall grow more brilliant because more fruitful with every passing year. From all points come tidings of the awakening of a deep conviction in the public mind that the greatest concern in life has to do with the training of childhood, and that the progress of the race demands that the best minds and the truest hearts be devoted to this great cause. The call has been sounded, and the choicest of the land are responding eagerly to it; and when it is realized that child study represents at the same time a scientific and a profoundly sympathetic attitude toward the study and training of child life, it will be appreciated that it is a movement which will gain in momentum at every point.

We have represented upon our program today the scientific and the practical aspects of child study. We have the fruits of investigations that have been carried forward with great care and patience, and which promise to be of direct practical benefit to everyone who has the direction of child life. We shall, too, consider the ways in which the results of scientific studies may be most readily and efficiently applied in the training of home and school. Thus we ally the scientific and the practical in our program, as they must ever be allied in all the affairs of life in order that they may have the most successful issue.

SOME CAUTIONS TO BE OBSERVED IN CHILD STUDY

BY OSSIAN H. LANG, EDITOR "SCHOOL JOURNAL," NEW YORK

The exuberance of the first proselytes in child study has given many a speaker and writer of a satirical turn of mind an opportunity to say witty things about pedagogic fads. The truth is that many of these enthusiasts did appear ridiculously pompous when they solemnly told how Johnny winked and what Nellie said and how Charlie neighed like a horse, having been cajoled into the belief that this was genetic psychology done in a scientific way. However, things new have a grotesqueness all their own, and it is this very grotesqueness which helps to make them talked about. The critic has in more than one way aided the introduction of the very thing he was opposed to, by croaking about it too noisily.

Notwithstanding all the funny stories that have been aimed at the efforts of the advocates of child study, not one sane and intelligent person has ever seriously doubted the pedagogic value of an intimate knowledge of children. It may be that sometimes a speaker, fond of smart argument, is heard protesting that special, conscious child study is unnecessary to a successful education, but he invariably defeats his own scoffings by the logic of the appended attempts at proofs. True, there are many good educators among mothers and teachers who know a great deal about children, tho they have never heard of child study, but does that prove that they never studied children? It is an absolute waste of time to attack or defend child study from this direction; sophistry is not a branch of present-day pedagogics.

While the *raison d'être* of child study cannot be denied, the methods in vogue in this particular field are certainly open to criticism. And, indeed, Professor Münsterberg was justified in sending in his *Atlantic* articles a stray shot at the kind of child study which has at present a monopoly. It is well to bear in mind that most of the mistakes in child-study methods have their origin in mistaken views of the *motif* of child study.

Some there are who think they have discovered in child study a means of revising the fundamental truths of pedagogy, a new kind of higher criticism, as it were. These friends are usually very gullible and are apt to swallow whole in their enthusiasm many of the psychological morsels served up by yellow Sunday journals. Being extremists, they will hardly remain true to their worship of pedagogic metaphysics long enough to feel the awful disappointment that might be in store for them, and we need not shed one single tear in their behalf. Child study has not come to destroy foundation principles nor to deprive them of one jot or one tittle of their vital force.

With many others child study is a pretty toy. Volumes of genuine, adulterated, and bogus sayings of children have been published for their special delectation. Sometimes the credulity of these friends is rather severely tried. Most of the bright little books purporting to be collections of children's sayings are full of cute counterfeits. Truth and fiction are usually mixed in a most fascinating way. Even Dr. Sully has not been able to keep his books of child studies free from colored statements, which add considerable brightness to the collection, but can hardly be expected to have pedagogic or psychologic value. The trouble with the general run of children's sayings is that they are so decidedly commonplace that a collection of them would have but little selling power. The love for fairy tales is not stored away with the top and the doll; adults enjoy them fully as much as the children, and a flavor of them is necessary to make child study palatable to those whose sole object is to be entertained.

Child study, to be sure, is not the one and all of education, but it is too serious a matter for simple diversion. I regard it as a pity that a great many earnest teachers have been led to look upon written collections of miscellaneous child observations as helps to their educational work. It may be laid down as an axiom that these observations have full value only for the one who gathered them. To others they may be suggestive, but nothing more. One might as well attempt to study botany in a library or from a herbarium bought of some collector. With every observation put down in writing there is connected a residuum of experience which remains concealed.

I do not wish to be understood as decrying study of the records of child observers in general. A great deal of valuable thought may be gathered from such studies of individual children as those of Perez and Preyer, and the preserved character sketches written under the direction of Basedow, Pestalozzi, Herbart, Ziller, and others. But the feature of greatest worth is, again, the suggestiveness of these records, and not the observations themselves; in other words, their chief value is to be found in the method pursued in gathering the observations. Moreover, it should be borne in mind that the aim of these child studies was to construct complete pictures of individual children. I regard these studies of individualities as of higher value than classifications under psychological subjects. It is in child study as in nature study: there is too much reading of books and too little actual observation.

There seems to be no agreement as to what is really worth studying. The majority of leaders in the child-study field point to physiological studies, and here much valuable work has been done in recent years. But these studies have no direct bearing upon education. They merely establish the physical and physiological factors which must be considered in pedagogic procedure. Nor are teachers generally capable of carrying on these investigations in a scientific way. What good does it do to set teachers on a hunt for bacilli, for cases of myopia, chorea, neurasthenia, and other physiological defects? All this is the business of the medical practitioner who is skilled in pathological diagnosis, particularly the school physician. The fact that many schools are still without medical inspectors does not invalidate the justice of the position here taken. The day must come when a school physician is considered as necessary as a teacher. But, meanwhile, any medical diagnoses teachers may be led to attempt are worse than useless, unless the teacher happens to be one of the very few who have an intelligent acquaintance with human anatomy and physiology. Even under the most favorable conditions it is doubtful whether a teacher could make any practical use of this sort of data. Where there is no regular medical inspection, there ought to be at least a thoro annual physical examination by a physician. At any rate, no child should be admitted to any school without a medical certificate setting forth his physical defects, if there are any.

It may be there are many here whose views are diametrically opposed to mine as regards the value of anatomical and physio-psychological studies of children carried on by teachers who have no preparation for making reliable diagnoses of this kind.

Having thus disposed, at least to my own satisfaction, of the futility of making child study a substitute for, instead of one of the aids of, pedagogics, the danger of allowing it to become a mere toy, instead of laboring for its development into a serious research in the interest of education, and the blunder of putting lay people to work on investigations which only thoroly trained physiologists, or physio-psychologists, can conduct with profit, I may now turn to those schemes which have at least the appearance of justice and pedagogic usefulness. It may be well to consider briefly the various *motifs* from which these latter plans may originate.

First, the child study may be conducted *in the interest of psychologists*. These studies, so-called, may consist either in the mere collecting and recording of observations or in actual experimentation on children. The former is of doubtful value, the second decidedly pernicious. No doubt experimental psychology occupies an important field, and those teachers who are qualified to assist in its development may be justified in contributing data. But how they can expect ever to get any pedagogical returns is more than I can see. Besides, there is much danger that the psychologic amateur work will deprive ambitious teachers of what little rock bottom they have to stand upon. Psychologic experimentation on children ought to have as little place in the school as vivisection. It is not necessary, and it opens the way to grave dangers.

Secondly, there are child studies conducted in the interest of pedagogy. Teachers are requested, by someone who is expert in determining educational values, to furnish particular facts about children. Those who thus aid in the accumulation of data may thereby obtain many practical hints. The gain of the one who classifies the collection is rather doubtful, unless the collector is favored with an unusual amount of native shrewdness and possesses experience, coupled with thoro pedagogic insight. Even then he will be safer if he relies only upon such information as is gathered under his direct supervision. It is a well-known fact that most of the child studies of this character are mere summaries of nicely classified prejudices and opinions generally which reflect what teachers would have stated in similar terms without going to the trouble of a special investigation. It may be replied that usually the children's answers to certain questions are gathered. Even that changes the result but slightly. Children, like the "grown-ups," are not willing to aid in any scheme that will reveal their weaknesses. A great deal of nonsense has been proclaimed with solemnity, purporting to be revelations of children's likes and dislikes. "What books, what songs, what games do you like best?" and other inquisitories of similar character, give birth to so much guessing as to what the teacher would be pleased to hear that the result will not add one iota to our capital of pedagogics.

And right here let me add that I am firmly opposed to all methods of prying and spying into the child soul, unless there is serious and absolute need for it. The child's secrets must be respected, and the things which appear most hallowed to him must not be rudely handled. How many of you would be willing to answer pointed questions touching your thoughts concerning your innermost feelings? Respect the child!

Pedagogy, no doubt, has gained much from such studies as Hall's *Contents of Children's Minds.* The caution to be observed in investigations of this sort is, not to mistake a knowledge of words for ideas, and *vice versa.* It is very difficult at times to draw any definite conclusions. Many students of normal schools and colleges stand high in psychology who have not the penumbra of a psychological idea. They might as well have gathered their knowledge from a dictionary. Nowhere else is so much caution required as in examinations into the knowledge contained in a child mind. I think I do not hit far off the mark if I say that 75 per cent. of the injustices committed by teachers are due to defective methods of examinations, intended to be studies of the contents of children's minds. Even the best of teachers are human, and that means they see the child, not as he really is, but as he looks thru their apperceptive spy glasses.

I thank the president of this department for his courtesy in making my subject read "*Some* Cautions to be Observed in Child Study." He evidently suspected that I would not furnish him anything complete anyway, and his consideration for your comfort also deserves special commendation. Let me then conclude my paper with a few fragmentary remarks, embodying some of my convictions concerning the purposes of child study and the methods employed in carrying them out.

Nothing final must be expected from child study. Every human being surrounds himself with some reserve, and even if teachers could look right into the child soul, they would not be able to understand it.

The most fruitful line of child study is that which aids the teacher to determine the effect of his teaching upon pupils, to find out whether the children have grasped ideas or only words, and to watch their educational growth. Studies of this kind are really self-examinations, and ought to be invaluable sources of counsel as regards choice of studies and form of instruction.

Closely allied to this form of child study is that which tests the educability of pupils, which includes the study of their educational needs as well as their capacities, and aids to a recognition of what is good for the pupil and what is best adapted to further his growth.

Really profitable educational child studies can be conducted only by trained teachers who possess pedagogic knowledge, skill, and, above all, tact and love of children. Trained educators derive from child study invaluable data revealing the educational needs of their pupils, and they turn it to good account also in the testing of the effect of their methods of teaching.

Child study does not aid in the discovery of what is best to give the child to supply his educational needs. This fact is often lost sight of. It may be, for instance, that we can determine the child's likes and dislikes in certain directions, but we do not find thru child study the pedagogical treatment needed.

The child's appetites are not a reliable index to his needs. A boy, and normal at that, may be fonder of green apples than of oatmeal. There is no such thing as spontaneous recognition of what is good for him. Some teachers have found that children can be fed even on grammar.

Still, the children's appetites and interests must be studied. It is absolutely necessary that they should be known. Economy is the watchword of modern pedagogics. The study of interests reveals the lines of least resistance in the child's make-up. Child study here serves the most useful purpose.

A strong argument in favor of training in systematic child study is that teachers thereby acquire habits of child study, chief among which is the habit of looking constantly for the educational effects of their teaching upon and in the development of their pupils.

Just one more word and I am done. All child studies must have behind them, under them, and within them an educational or pedagogic purpose, if they are to be of any help to teachers. Before beginning an investigation, it must be known what to do with the result.

A YEAR'S STUDY OF THE ENTERING PUPILS OF THE SPRINGFIELD, MASS., HIGH SCHOOL

BY FRED W. ATKINSON, PRINCIPAL OF HIGH SCHOOL, SPRINGFIELD, MASS.

The last of May, 1897, the grammar-school principals of Springfield were asked to meet the superintendent of schools and the principal of the high school for the consideration of a plan of high-school pupil study. Six out of the seven principals showed their appreciation of the proposed plan and promised their co-operation. In deference to the objections of two of the principals, it was decided that answers to the questions concerning the pupils who were to enter the high school the coming September should not be sent to the high school until the last of October. By that time it was thought the high-school teachers would have become somewhat acquainted with their pupils.

In all, 181 memoranda were returned by the grammar principals, 94 concerning girls and 87 concerning boys. Generalizations are made on the basis of the first 140 records returned in regard to all of the points covered by the questions. It is to be remembered, to reach generalizations, however valuable they may be found, is not the object, so much as to find out individual needs and capacities.

Of 140 boys and girls 93 have passed thru every grade of the Springfield public schools. Twenty-one have either omitted one grade or have done the work of two grades in one year. Eight boys and 9 girls have attended schools out of the city part of the time. Four boys and 5 girls have had only private instruction. These generalizations show conclusively that the same treatment will not do for all of the pupils of the freshman class. It is only when these facts are considered in connection with the individual himself that they are helpful in determining a distinctive method of treatment. Of 140 boys and girls 8 only are reported as irregular in attendance — 3 girls and 2 boys poor in health, and 3 boys of whom 2 worked out of school hours and 1 was evidently irregular in every respect. Judging from the reports of the principals, there are 9 boys and 16 girls not in good health, and of these 2 only were excessively nervous. Eight have a great deal of headache. There are 14 out of the entire number who have severe and frequent headaches. A great many are growing rapidly and are not very strong, who have otherwise fair health. The principals in several cases noticed defective sight or hearing.

The answers concerning qualities are difficult to generalize. The most common temperament among the girls seems to be "cheerful," "sunny," "quick," "winning." A great many have marked ambition and conscientiousness. There were only four cases of diffidence noted. The most frequent descriptions of character are "good" and "reliable." There are a few cases of vanity, but only two sly and unreliable characters. There are more slow temperaments among the boys and more cases of laziness, carelessness, and lack of responsibility. The words "ambitious" and "straightforward" occur often. Four characters are "unreliable" and four "unstable." The subject of scholarship I pass over. The data concerning selection of course of study are peculiarly interesting. Twenty-four girls and 21 boys are taking other courses of study in the high school than those which the principals would have recommended. It was the judgment of the principals that 12 girls and 5 boys only should be allowed to do extra work the first year. Fifty-three are doing extra work and only 7 of these are of the number recommended for it.

The relations between school and outside interests and home conditions are very close. The most favorable condition seems to be a home where either some slight work or some accomplishment, as music, is required. The boys who do some work and the girls who help their mothers at home are usually thoro in their school work. Many make collections of stamps and of minerals. No work is required of the majority. The last question, "In case of difficulty in learning or fault in behavior, what method of instruction or discipline have you found most helpful?" is the least answered. In some cases it is suggested that "an appeal to ambition" or "an appeal to the better nature" is sufficient, where behavior or work is at fault. Many times "a slight reproof" answers. In several cases it is advised to appeal to the parents.

On the whole, the grammar-school principals have shown cordial co-operation, and the information obtained from them is reliable and of practical value.

However intimately some city high-school principals have come to know their pupils, and however successfully others have won the cordial co-operation of the grammar-school principals, still it must be admitted that practically little has been done to bring teachers and parents to work together. City life seems to exclude the possibility of knowing the home influences. No one questions the wisdom of bringing parents and teachers into a mutually helpful relation, and in a few cities steps have been taken to gain the sympathies and co-operation of parents. Parents have been encouraged to visit the schools, conferences have been held, but rarely have parents been asked by high-school teachers to give them the benefit of their knowledge of the pupils' health, eyesight, hearing, recreation, home study, reading, tastes, temperament, character, etc. To obtain information concerning just these points, 197 blanks were sent to parents of the entering class. Over 85 per cent. were returned with answers carefully filled out. There were those who feared the misapprehension of parents as to the objects we teachers had in view; and others who prophesied even serious trouble. Here, too, I am able to say many parents expressed appreciation of the efforts of the teachers and of the interest that led to the asking of the questions concerning each pupil.

The health reports of the parents usually agree with those given by the principals, with two exceptions: the principals in several cases noticed defective eyesight or hearing when the parents thought all was right. The other disagreement is that the parent sometimes emphasizes the fact of "nervousness" when the principal does not mention it. About 20 per cent. of the girls have not had good health the past two years, and in some cases have not felt so well since entering the high school. In most of these cases there is either no recreation, or the exercise consists in housework or music study, and the results are worry and nervousness. Do not these facts speak for themselves? Is there any doubt that the question, school life in relation to health, is one for us educators to consider? About 20 per cent. of the whole class are reported as having defective eyesight. No special tests, however, were made. The question arises: How many would be found with eyesight below the normal were careful tests made? The hours of sleep average eight or nine, seldom more, tho sometimes less. One boy sleeps ten or twelve hours, takes plenty of time for breakfast, and has a "very good temper." The question of sufficient time taken for breakfast differs with boys and girls. The answers for boys average "yes," tho sometimes it is "not always" or "usually." "No" occurs four times definitely. One boy eats nothing, and another takes "a part of a cup of coffee." With the girls the answers do not average "yes," but are more often "not always," "eats little," or "no." Some more cheerfully answer "sometimes." One says, "she is not allowed to go without, but it is often forced." The character of these answers demands that something be done.

I wish there were time to give fully the reports concerning recreation and exercise. Judging from these results, it is clear that regular physical exercise in a gymnasium should be provided for. Six boys are reported as taking no exercise. Very few girls take over one or two hours of exercise a day. Twenty-five per cent. take very slight recreation or none. One girl takes only evening exercise, studies music, has headaches, and is "nervous." The influence of the bicycle on exercise is interesting; nearly one-half of the boys and about one-third of the girls ride wheels. The questions regarding study are more definitely answered than any others. In general, the feeling is that too much is not required of the pupils, tho no more should be required. A few complain of too long lessons, and one writes: "Without intent to criticise, permit me to say that I have often felt that it is possible for the teacher to be overzealous, and in the anxiety for advancement to give more for a lesson than some pupils can learn and retain." The study hours vary from one to six. The pupils average two or three hours of study, at least judging from these reports.

To determine accurately the average amount of study done would, I fear, be a difficult task.

The answers to questions regarding individual likes and dislikes are most interesting and often most important. One boy has a "steady" dislike of "scolding at home for not getting his lessons good." One boy "likes everything in school, from cellar to attic." Latin causes the most trouble naturally. A number dislike zoölogy, tho there is not one complaint of finding it hard. Some find English hard, and a few algebra. A great many find classical history hard, even when they like it. One girl "got C for history, and it about made her sick. She talked in her sleep." This is an extreme case, but there are several girls and one or two boys who "worry" over their studies.

If there is one feature in this plan of pupil study which distinguishes it from the syllabi used in university youth study, it is that it seeks very little information from the pupil himself.

The pupil's outside reading, as an index to the outside activity, may well come under the direct study of the teacher. It will be legitimate to draw data from the pupil himself concerning the books read, favorite characters and authors, favorite magazines and papers, use of library, etc. It is very important that a love for good miscellaneous reading be established while the young people are in school, for this habit they are likely to carry with them thru life. I am almost ready to say that what our boys and girls read is more important than what they study. Howell says truly: "The average boy does more for his education by observation and reading than the schoolmaster is able to do for him."

To find out the reading of the pupils done during the summer, the reading blank was used. Exceedingly suggestive data were obtained. This blank was filled out by all the classes of the school. It was found that in the Springfield High School the best reading is by the freshmen and the poorest by the seniors. That this practical result has been reached of itself more than compensates for the time and effort that have been expended in this study. The reading lists of the freshman class are very uniform, and show plainly the strong influence the grammar schools have in forming a thoroly good literary taste. The books most read last summer by the entering class were *Ivanhoe, Lady of the Lake, Marmion, A Tale of Two Cities, Old Curiosity Shop, Oliver Twist, David Copperfield, Pickwick Papers, Ben Hur, Vicar of Wakefield, Pilgrim's Progress, Uncle Tom's Cabin, Julius Cæsar, Hamlet, Merchant of Venice, Westward Ho, John Halifax, Ramona, Lorna Doone, Treasure Island, Near to Nature's Heart, Wide, Wide World, Peasant and Prince,* and the poems of Longfellow and Whittier. Cooper's novels were also read by many. Scott is the favorite of 49, and Dickens of 38. Other favorites were as follows: Longfellow, 19; Miss Alcott, 8; Henty, 7. Most liked history in the form of "fiction, with history mixed in," as one young lady expressed it.

The liking for biography is remarkable. One boy read the lives of Garfield, Grant, Sherman, and Blaine. Another read lives of Charlemagne and Cromwell, and the biographies of Buffalo Bill, Daniel Boone, and David Crockett. Forty-three read nothing last summer. The reasons of preference are the most interesting portion of freshman lists, and are honest, direct, and forcible. They usually show appreciation of the noblest traits of character, rather than any effort at literary criticism. It is worth noticing that it is usually not the most striking personality or phase of character that is preferred, but the quiet and substantial virtues. One boy likes General Grant, "because he is polite, but stern in his business." Another admires Sherlock Holmes, "because of his strength of mind." Another likes Little Nell and her grandfather, "because they thought so much of each other." Don Orsino is admired "because of his perseverance and dislike of idleness." An ideal or heroic character placed in a historic situation seems to appeal to the largest number. Some reasons of preference are unique. *Ten Thousand Leagues Under the Sea* was enjoyed "because everything in it seems almost impossible." The character of an old maid was preferred "for the reason that it shows so plainly what kind of persons these old ladies are."

The various data obtained from grammar-school teachers, the parents, and the pupils have not been taken as an ultimate guide. They have simply been a help toward intelligent study by the high-school teachers. Each teacher of freshmen has had a small number (fifteen or twenty) of pupils to look after, and has tried to make their acquaintance as thoroly as possible. Sixty boys and ninety girls have been studied. As far as possible in so large a class, the teachers were assigned those pupils in whom they had the most interest, and the papers giving the results of this pupil study show that the matter has been carefully and seriously undertaken. The studies are very interesting and sympathetic.

Out of the sixty-six boys fifteen only are of absolutely poor scholarship; a study of these shows that, except for one unusual case of a boy who is overworked on a farm and two cases of poor health, these weak pupils lack ambition. They study too little, lack power of application, and have not definite purposes. There are six mentioned as decidedly above the average in ability. Many lack imagination; others have too great a number of outside interests.

In too few cases is there evidence of independent interest in studies. There is need of pushing and special effort to awaken interest on the part of the teacher. This lack of interest arises in a great many cases from too narrow a conception of school life. Many are at school for practical ends only, and do not take any interest in studies of which they cannot see the practical application. This is doubtless the result of home influence. These sixty-six boys are divided into three very sharp classes—a few who have further study in view, those who have merely practical motives, and a very large proportion who have no definite motive for attending school. Most of the boys who take the manual training come under the second class; they study merely to fit themselves better to earn a living. One such boy is of accurate mind and fair ability, but baffled his teacher who studied him. She came to the conclusion that what he needs most is "a widened horizon." He dislikes his biology, "which he regards as being of no practical value." His manner is indifferent, his attention wandering, his deportment sometimes troublesome, and yet he is in school "for an education." This case is important as a strong type, of which there are too many less striking counterparts. But the third class, those who have no definite purpose, is the most difficult to understand and to educate. Some of these pupils have good possibilities, but cannot be appealed to effectively, because their school work is not grounded on definite purpose. School is in some cases frankly regarded as a place in which to pass away the time.

As studies of character many of these papers are thoroly interesting. One boy is well-meaning, but "too sociably inclined," hence forgets himself often. He is weak in deductive reasoning, hence illogical and blundering. This same boy wants to get an education "to be of some earthly use." One is "too indolent to improve weak points," is interesting and exasperating. His purpose seems to be to "do as he pleases." One is "an interesting boy as illustrating the many-sided difference between the private and public-school student." He is unable to "think under pressure." His ability to memorize is unusual. One boy "sometimes slights school work for outside work in which he is more interested, but not intentionally. This boy has unusual ability to think for his age, and is so genuinely interested in the study of science outside of school that he has at times made himself ill from overwork." Another is "happy" by nature, "serious" because of responsibility connected with home and school, and of a character "wonderfully fine and strong." He would obtain ideas even under unfortunate circumstances, so eager is he to know.

Of the ninety-two girls who have been studied, ten are of poor scholarship. Two of these unsatisfactory pupils are well-meaning girls, but weak in mind. They make efforts in vain to comprehend their work. Two are of poor health. Four seem incapable of serious application because of lack of energy, of interest, and of mental self-control. Eighteen of the ninety-two are of excellent scholarship, and some of the most interesting papers concern these. One is exceptionally original in written work and is "able to apply what she knows." One is slow, but "all-round." One paper is most interesting to read. It concerns a girl who was born in Finland. She is described as "enthusiastic," "fond of jolly out-of-door pleasures," "always on the alert to catch every small bit of information," "keen of observation." She "wants to become a teacher."

One girl likes Latin and algebra "because there is something in them to overcome." In all of these excellent cases of scholarship there is strength of character, abundant motive, and independent interest in work. In most cases there seems to be plenty of out-of-door exercise and some variety of interests outside of school. This leaves sixty-five who are either of medium ability in school work, or who are uneven in their work. Some of this number are pupils of fair normal development; but there are too many who are characterized by lack of self-confidence, lack of motive, and general lack of vitality—an all-round lack of positive qualities.

There are as many as eighteen of the ninety-two who are not interesting because they are not interested in anything strongly. Such expressions are used to describe their mental conditions as "needs stimulus," "needs to exercise her mind more," "likes English best and tolerates the rest," "listless," "passive," "negative." Of one girl it is said, "she has no definite likes or dislikes." Of another the complaint is, "no vital interest in or out of school." Of several it is said that "mental awakening" is needed. One girl "needs an earthquake to arouse her." There is a great deal of reticence, which at this time of a girl's life seems almost lack of individuality, when it is, in reality, only immaturity and diffidence, sometimes morbid diffidence. This may account for some of the seeming lack of interest. But lack of physical vitality is probably a fundamental reason for lack of positive qualities in so many of these girls.

There are few of these ninety-two girls of robust health. There are forty-five of these girls who are not strong, and some of them of weak health. There is a surprising amount of frequent headache. There is insufficient exercise in the open air.

A few comparisons may be made. There is a greater number of interesting studies of boys than of girls. There is more variety of interest, more physical vitality, fullness of life among the boys than among the girls. There are more girls who enjoy studies from real interest in the subjects. There are more readers and more who can express themselves well in writing among the girls.

As a whole, these are painstaking and valuable studies in a good cause seeking to know the pupil's individuality as far as it is possible in a large public school. The best studies are those that seek motives and causes. Such a study affords a definite basis for the development of a pupil's peculiar capacities and the correction of his deficiencies. Under this plan of pupil study observations which every good teacher naturally makes are systematized and scientifically directed. Having in mind, solely, the interests of the pupil, the results of one teacher's observations of a particular pupil have been transferred to another. Co-operation has been possible, and the efforts to help a pupil have been more effective. Pupil study has tended to unify the work of the various departments of our high school. It has shown teachers that the purpose of each department is the same. High-school teachers, from thinking so much of what and how they teach, are in danger of forgetting the pupils themselves. Pupil study seeks to understand the individual boy or girl in order that the means and methods of instruction may be adapted to his distinctive needs and capacities. At its best, the method suggested of studying, consciously, the pupil, during his high-school course, will make us high-school teachers better able to watch over and further intelligently and sympathetically the education and physical health of the boys and girls for whose future happiness and usefulness we are responsible. Such a plan, if wisely and generally administered, ought to show to the educational world what can be accomplished when grammar- and high-school teacher, parent and pupil, work together.

HEREDITY AND ENVIRONMENT—A STUDY IN ADOLESCENCE

BY EDGAR JAMES SWIFT, NORMAL SCHOOL, STEVENS' POINT, WIS.

The physical condition of children is a partial test of the vigor of their ancestors. A percentage of 84.76 of the Waukesha Reformatory boys were in good health. Twelve said their health was fair, and, as most of these had little or nothing the matter with them, it does not seem unreasonable to class half of them with those in good health. If we do this, the percentage rises to 87.61. So far as this indicates the physical vigor of their families, it is not seriously against them. The Elmira Reformatory reports 90.4 per cent. of its inmates in good health at the time of admission, and only 3.7 per cent. diseased.

If we turn from the physical condition of the boys to their mental ability, we find 30.45 per cent. good, 41.62 per cent. fair, and 27.91 per cent. poor. This estimate was made for each inmate by the teachers of the several classes. At Elmira, again, 75.8 per cent. of the 7,168 young men who have been in the institution were of good ability, while only 1.2 per cent. were regarded as deficient. The difference between these results may be partly due to the fact that the estimate of the Waukesha boys was based almost wholly on ability as shown in school work, while at Elmira the opportunity for judgment is considerably enlarged.

A percentage of 28.35 of the boys have lost their father, and 31.03 per cent. their mother. This is rather a large proportion. Morrison found that 20 per cent. of the industrial school population of England and Scotland were fatherless, and 14 per cent. motherless. The large number of motherless children found by this investigation may be accounted for either by the father's desire to remarry leading him to wish to be rid of his children, or by trouble with the stepmother. This seems to be indicated by the fact that 22.5 per cent. of all the children have stepmothers, while only 15.53 per cent. have stepfathers. The danger to young children if either parent remarries becomes evident when we see that 30.43 per cent. of these boys report unkind treatment by their stepparent.

Morrison[1] thinks that the large number of reformatory children who have lost one or both parents is evidence "of a degenerate race either on the father's or the mother's side." The inference that these children are more inclined to crime does not seem to be warranted.

Partially orphaned children of wage-earners gravitate to the reformatory quite regardless of criminal proclivities. If fatherless, they are a burden to the mother who has difficulty in supporting them, and if motherless, the father finds them an obstacle to remarrying. In both cases they are left to themselves, while the parent is away from home at work, and so they become incorrigible thru street life.

Insanity was found in the ancestry of 4.6 per cent., epilepsy in 5.68 per cent., and 6.13 per cent. reported chorea. In only four instances did two of these three nervous diseases appear in the same family line. One boy reported a death from nervous prostration and consumption. Either insanity, epilepsy, or chorea was traced in the ancestry of 13.82 per cent.

A percentage of 10.47 are of ancestry in which at least one has been convicted of crime, while 7.48 per cent. said that their father had been convicted. If we include in the estimate those who had never been convicted, so far as their sons knew, the percentage falls to 6.96.

So far as could be learned from the boys, their fathers were, in almost all cases, hard-working men; 125 were skilled workmen, 46 unskilled, and 33 farmers. Only 5 did not work, and 2 were saloonkeepers. When asked about the character of their fathers, 86.33 per cent. said they were good men, 11 per cent. thought them bad, and 2.65 per cent. fair.

Drunkenness in their ancestry was admitted by 37.32 per cent. The parents seem to have been generally meant here, as the same question asked about them later gave practically the same result. It is interesting to note that of the 81 boys one or both of whose parents or ancestors were hard drinkers 52 did not themselves drink, while of the 136 whose parents and ancestors did not drink 31 reported that they were accustomed to drink either whisky or beer, or both. It is not easy to explain this on the supposition that youthful delinquency is the result of debilitated nerve centers brought about by ancestral alcoholism and disease. But, if boyhood crimes originate in a longing for excitement which finds its gratification in crime because a healthier outlet for these feelings is not at hand, the results found here are not so difficult to understand. Intemperance would, then, follow crime rather than precede it, and this has been found to be true.[1] In any case it leaves a large number of delinquents to be accounted for in some other way. At the Elmira Reformatory over 50 per cent. are of temperate ancestry.

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[1] *Juvenile Offenders*, p. 100.

If we consider all who were included in this investigation, 34 out of 217 had learned to drink whisky, while 59 in 218 drank beer. Of the 54 who gave the age at which they began to drink, 18 commenced at 10 years of age or younger, and 30 between 10 and 15, while 3 said "very young." Only 3 were older than 15 years; 9 did not know the age.

The influence of others is seen in the way in which they began to drink. Fourteen became accustomed to its use at home, or were given it elsewhere by their father or some other member of the family; 18 were urged to drink by older boys, 1 was working in a brewery, 2 wanted to see how it tasted, 1 was selling papers in a saloon, 2 drank because they saw others do it, 3 "for fun," 2 at a party, 1 was paid by a man to drink, 3 thought they felt a desire for liquor, and 14 did not remember how they began.

The best and worst part of a child's education come to him unconsciously. He acts out its suggestions before his judgment is mature enough to be critical. Only 24 had read any books that were not harmful, and many of these were valueless. They were merely not bad. Thirty-five had read none at all, 29 all kinds, and 12 said good books, but were unable to name any. Most of the books belonged to the class of the James boys, Diamond Dick, and detective stories. There seems to be force in Dr. Ferona's assertion that "three-fourths of those who enter prison have been led to a life of crime from neglect of education." Moral ideas are rare among these boys, but there is no evidence of a prevailing absence of the moral sense. Few of them glory in what they have done. One hundred and twenty-seven said that they would have preferred to spend their evenings in a free club room playing games, had there been such a place where they lived. Three admitted they liked the saloon better, and 13 would rather have remained at home. When asked whether they would like to be such a man as their father, 138 replied yes, while 58 wanted to be better.

The children of wage-earners in towns and cities, the class from which reformatories are constantly replenished, are, to a large extent, deprived of the stimulus of social respectability. Besides, they do not receive the same treatment as those socially higher. It is rare for anyone who can win their admiration and arouse them to personal effort for improvement to associate with them, at least in any other than a patronizing way. No one took enough interest in 20 of those who drank to advise them to stop, while only 6 of the remaining 41 reported being urged not to drink by anyone outside of their family. Fifty-four had never seen or heard of anyone whom they greatly admired. Of those who said that they had, 54 gave some member of their own family, 28 Washington, while 25 were scattered, and 42 were unable to name anyone.

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[1] MORRISON, *Juvenile Offenders*, p. 70.

Almost all of the boys had lived the greater part of their time on the street. They were under the influence of associates older in crime. One hundred and twenty-four said they had never felt any desire to do wrong, but were led on by others and wanted some fun. Of the remaining 14 who replied, 11 believed that they alone were responsible for what they did, while 3 were not able to give an opinion,

The question of interest to society is not, Can children become criminals because of inherited tendencies? but rather, Must these constitutional peculiarities reveal themselves in the life of the individual, however unfavorable to their development the surroundings may be? The record of 106 children, who had been placed in families by the Minnesota State School for Neglected and Dependent Children, was examined in the hope of getting some information on this subject. The history book of the institution showed that one or both of the parents of all these children were distinctly bad. The least of which any of them had been guilty was habitual drunkenness and desertion of their family. In 39 instances intemperance, insanity, or criminality was found in both parents, and 39 of the mothers were known to be prostitutes. The fathers of 2 had been convicted of murder, and 3 were serving a sentence in the penitentiary. This is certainly a good ancestry to produce criminals, if the effect of heredity is beyond control. The children whose record is given here include all those on the books of the institution, who were more than 17 years of age when last investigated by the state agent, and whose parents, one or both, were known to be bad. All but 16 of them were older than 18 years. Fifty-two of these children were classed by the state agent as excellent, 36 as good, and 18 as bad. Those designated as excellent were so strong in character and ability as to attract unusual attention, while by good was meant above reproach in character. One of those recorded as bad was a prostitute before entering the school. Eighty-three and two-hundredths per cent., then, of all those of known bad parentage developed into young men and women of good character when placed in better surroundings.

At the Wisconsin State School the record of 91 children was studied. The same rules of procedure were followed as before, except that a few between the ages of 16 and 17 were admitted. Both parents of 19 children were either intemperate or insane, or had committed a crime, and 13 of the mothers were prostitutes. In this school 12 were classed as excellent, 73 as good, and only 6 had turned out badly. One of these 6, it was found, had been placed with a man who was a hard drinker, altho this was not known when the boy was given to him. Another, one of the younger girls, was seduced by the man in whose family she was placed. The small number of these that did not turn out well, compared with those from the Minnesota school, is probably due to the fact that many of them are younger. It is quite possible that some may still revert, tho inherited characteristics usually appear in full strength by 16 years of age.

When it is remembered that these children remained with their parents long enough to imbibe a good deal of immorality by contact, the significance of these figures greatly increases. Besides, the children are placed under an indenture contract, and, except in rare instances, are treated as servants by those who take them. They are usually valued in proportion to the work they can do.

The average age at which 255 boys were taken to the Waukesha Reform School was not quite 13.7 years. This is the time when the largest amount of energy is seeking occupation and wise guidance is particularly needed. Yet this is exactly what these boys do not get. They are left to the chance of the street. At this period of life the nerve tissue is in a hyper-irritable state, and, as Clouston[1] tells us, certain forms of emotional and irrational willfulness, immorality, impulsiveness, and adolescent insanity are not uncommon. Escapades at this time do not necessarily point to a criminal nature. The excessive irritability of the nerve centers, to which the frequency of nervous disorders at this period points, makes them erratically sensitive. At this age children are especially susceptible to suggestion.

The acts for which many of the boys were sent to the reformatory seem to have been a sort of reflex resistance to dull or disagreeable conditions of life, a blind effort to escape from a hateful monotony. The history book shows that the common offenses were disobedience, running away from home or school, and stealing articles of little or no value, such as candy, tobacco, knives, or small amounts of money. The wish to have some fun was the prevailing motive with many. In comparatively few instances did the things that they took have much value, and most of these were articles which boys long for. They were generally bicycles, watches, and guns. Only six boys out of 254 stole money in excess of $5.

A sudden change comes in the early years of adolescence, and with it new demands. Energy is in excess, and the childish sports which formerly absorbed it no longer satisfy. Early education consists to a large degree in meeting and overcoming inherited nomadic and anti-social impulses. The lawless acts of this period are probably the result of surviving rudimentary traits.[2]

The successful control of these ancestral tendencies is the most difficult task of child training. If opportunity is given children to engage in enjoyable sports, exciting enough to satisfy their boundless imagination, and if school work is so planned as to respond to their varying interests, these rudimentary impulses may gradually be eliminated from their life. These reformatory boys were not only left to the unrestrained influence of these ancestral traits, but, in addition, the surroundings were such as to favor their abnormal development. The entire absence of the moral sense in hardened criminals, resulting in practical reversion and the redevelopment of those activities that are ordinarily rudimentary in the human race, is probably due, in many cases, to the environment reviving their latent power of functioning.

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[1] *The Neurosis of Development*, p. 12.

[2] ELLIS, *Pedagogical Seminary*, October, 1897, p. 188.

Infancy and childhood is a transition period from lesser to greater brain complexity. If conditions are favorable, this complexity is in the direction of greater intellectual and moral perfection. New cell connections are now being made, and the associations thus established determine the character of the man. It is probable that most of these connections are made unconsciously. Daily contact with associated ideas and acts will end in establishing them in the mental background, however unnatural they may be. Natural and reasonable are relative terms. Their interpretation depends on the paths that have been made among the cells during their expansions from infancy thru adolescence, when development followed, uncritically, the lines suggested by experience. The complexity that characterizes a developed brain is not a spontaneous growth. Tho mental limitations and possibilities lie within the brain itself, the direction that these possibilities shall take, resulting finally in pro-social aspirations or in anti-social tendencies, is determined from without. Criminal training may end in as complex cerebral associations as the best education. Enlarged mentality is the result of life amid broad social relations. The subjective possibility for character is actualized only under the influence of perfecting social stimuli. Moral obtuseness is not necessarily the result of native incapacity. It is more often due to constant exercise in perverted perceptions. Under the action of external stimuli modifications are constantly going on in a child's brain. The form that these modifications take will depend on the relations found in experience. The child accepts relations as they are offered, and the ideas thus related form his standard for future judgment. The immediate value of an idea depends on responsive associations, and these are determined by the relations prevailing in the mental background. Hasty action will be common, unless there are arresting secondary associations of sufficient strength to hold the mind in balance until their full meaning can assert itself. The greater the number of these secondary associations, the more deliberate and reasonable will be the final decision. The relations resulting from constant contact with vicious surroundings account for much of the moral perversion that leads to thoughtless action, and later to crime.

It is doubtful whether in three-fourths of the cases criminal tendencies are anything else than a convenient name with which to cover our social failure in education. If, as Morgan tells us, we have good grounds for believing that "the growth of intelligent plasticity, in any given race, is associated with a disintegration of the instinctive plan, congenital adaptation being superseded by an accommodation of a more individualistic type, to meet the needs of a more varied and complex environment,"[1] and if "a suitable training long enough continued can, to a certain extent, derange the hereditary tendencies which we call instinctive, and create new ones,"[2] heredity loses the charm of necessity, and society with its power to control environment becomes responsible.

CHILD STUDY IN THE TRAINING OF TEACHERS

BY JOHN G. THOMPSON, NORMAL SCHOOL, FITCHBURG, MASS.

This paper deals with but a single aspect of child study and a single phase of the training of teachers. It presupposes that child study should have a place in such training and does not advance reasons therefor. It assumes that the study of children should be a large factor in the preparation of those who are to teach children rather than subjects. It offers no opinion as to just how much time or just what part of the work spent in preparation for teaching should be devoted to child study, but discusses in a brief manner the lines along which this study should be conducted so as to give proper training to those fitting themselves to teach.

One may venture to predict, without fear of loss in reputation as a prophet, that, when an entirely new subject is added to the curriculum, whether it be to that of the primary school, the secondary school, the normal school, or the college, in the teaching of such a subject will be found nearly all the errors and weaknesses that have been discovered and corrected in other teaching. The years required to convince school authorities, and even teachers of drawing, that the way to learn to draw is to draw, and that the way to learn to draw objects is to draw objects, instead of copying from the flat, is a good illustration of this. We begin to hear that we have been all wrong in regard to nature study, or elementary science, as in our wrongheadedness so many of us have insisted upon calling it. But how long it has taken us to learn that love of nature can only come thru communion with nature and never thru dissection or destruction, or even thru scientific nomenclature! And in child study, as carried on today in the training of teachers, are we not repeating the old errors? Missteps and falls are to be expected in learning to walk; but must each new child in the family tumble over the same old objects?

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[1] *Nature*, February 3, 1898, p. 328.

[2] CHARLES LETOURNEAU, *Popular Science Monthly*, February, 1898.

Three movements are now, and have been for the past few years, particularly prominent in school work. The first is a re-emphasis of the truth, long ago pointed out, that we should study things themselves rather than treatises about things. In the study of literature today, reviews and criticisms, the story of the life of the author, accounts of the peculiarities of his person or his manners, narration of circumstances attending or leading up to the writing, date and form of publication, are considered of small importance compared with the reading and absorption of the piece of literature itself. In geography, the reading or memorizing of descriptions of physical features, or of the work of physical agencies, is no longer allowed to take the place of field work. We are beginning to see that the earth and the out-of-doors are very near to every child and at the hand of every teacher. In nature study it will no longer do to study trees in the schoolroom, or birds from descriptions, pictures, or mounted specimens. Yet in child-study we seem likely to repeat the old mistake and to study about children rather than to study children themselves. Classes of students preparing to be teachers are required to devote the larger part of their precious time to reading and studying articles and treatises about children, and to collecting anecdotes of child life. In some institutions verbal description is reinforced by collections of pictures of children of various ages. Logically, may we not expect to find pictures followed by mounted specimens? Summer schools offering courses in child study, so far as I am informed, in no case study children themselves, but always about them. A course of bird study carried on as is so much of our child study would meet with deserved ridicule. Yet the children are always with us, and the least of these little ones is "of more value than many sparrows."

That those training to teach should familiarize themselves with what has been done in child study — with the works of Preyer, Perez, Baldwin, Hall, Barnes, Warner, Miss Shinn, and others — is not questioned. The point I wish to make is that such work should be subordinated to the actual study of children. Where such is not the case, and the study of children is made of less importance than the study of works about children, the old error of studying science and nature from text-books rather than in the laboratory and the field is repeated.

The second movement in the new education is a demand for the recognition of the individuality of the pupil. The tyranny of the graded system, the evils of the "lock-step in education," are apparent as never before. In school work in general we seem to be breaking away from the idea that there is some one average or ideal child that may represent the pupils of the first grade, or those of the third grade, or those of the fourth grade, etc. The teacher is beginning to realize that the forty pupils in her grade must not be considered as forty times one, but as forty ones, each one differing from every other one. The failure to recognize this truth, and to direct teaching to meet individual needs, should increase the number of the teacher's deadly sins, as enumerated by Dr. Burnham, from seven to eight. To forget the individual in dealing with the class or with the school is one of the easiest things for the young teacher. He must constantly guard against it, and his training should recognize the fact. Naturally we expect the greatest assistance in this matter to come to the teacher thru child study. There are indications that this expectation will be met in the near future; but in child study so far the greatest stress seems to be placed upon averages. The influence of suggestion upon the child of five, what the child of six likes to read, how often the child of ten plays truant, how the child of twelve regards tale bearing—these and similar ones seem to be the vital questions. Thousands of answers are collected, tabulated, and averaged in the attempt to build up the average or ideal child for each year or grade. Yet the teacher's chief interest is not in the child of five years of age, nor the child of the first grade, but in Mary Smith, Johnny Brown, and Susan Jones.

The teacher in training or in actual service can be interested in the advancement of child study as a science only incidentally. It is not his business to prepare questionnaires, and to collect and tabulate answers to the same in the attempt to formulate laws of child development. This is the work of scientific investigation, and should be left to those who are interested in discovering some new general truth in regard to children, more than in the progress and development of some few particular boys and girls. Child study as a part of the preparation of teachers should develop skill in studying the individual for the sake of the individual.

A knowledge of the few general truths established in regard to the development of children is absolutely necessary, but most of these are so old and so almost axiomatic that the acquirement of such knowledge will call for the expenditure of but very little time. Provided the course be long enough, it may be well to give the student teachers some acquaintance with the various methods of child study—with the scientific, the semi-scientific, and the unscientific, to use Dr. Scripture's classification.

Child study, in so far as its influence in the training of teachers leads them to lose the individual in the mass, to interpret all children in the terms of some single average ideal child, is repeating and adding to the old error that has grown out of the closely graded system. In so far as such study develops in those preparing to teach the knowledge that each child must be studied as an individual, and must be taught as far as possible as an individual, just so far is child study in harmony with one of the most promising educational movements of the day.

The third, and perhaps the most important, movement in present education is the growing appreciation of the truth that was in the mind of Garfield when he declared that Mark Hopkins on one end of a log and a student on the other constituted a university; that was in the mind of Emerson when he said that it matters not so much what you study as with whom you study; of the truth that must come home to everyone who tries to analyze the power of any great teacher, that the personality of the teacher—that inmost spirit which is the man—is of the first importance. The recognition of the supreme importance of this factor is doubtless due to a better understanding on the part of the public in general as to what education is. In the minds of fewer are scholarship and culture synonymous. More are beginning to see that the result of teaching should be quality of mind rather than quantity of knowledge, that there may be encyclopædic scholarship without culture, and that there may be culture with small scholarship.

As is true of the study of literature and of nature, and, in fact, of any subject, the study of children may result in the accumulation of knowledge or may result in culture. Culture has been defined as "the process by which a man takes the world into his nature and is fed, sustained, and enlarged by natural, simple, deep relations and fellowship with the whole order of things of which he is part." Is child study in normal and training schools today so conducted that the student preparing to teach takes the children "into his nature and is fed, sustained, and enlarged by natural, simple, deep relations and fellowship" with them? Or are instructors in child study repeating the error of the old education in attempting to develop teachers by additions from without, by simply storing in their minds vast collections of miscellaneous facts about children? Personality is to a great extent the result of culture. Is child study so taught that thru it the personality of the student teacher is riper, sounder, more attractive to children?

Children are studied as a mechanic might study nicely adjusted and complicated machines. Many eminent scientists in various parts of the world are engaged in studying them in this way. Much delicate apparatus has been invented to assist in this important work. The length of time after the proper stimulus has been applied to the machine before each of its various parts are in motion, the rapidity with which the parts move, the length of time that each can move after being started, these and similar measurements are made, many of which are very minute and very delicate. Boys are compared with girls, young children with old. The object of it all is to add to discovered truth, and, while some familarity with the method will be helpful to the teacher in broadening his outlook, if in no other way, one cannot help agreeing with Professor Münsterberg that such studies as "how in fractions of seconds different just perceivable optical stimuli vary for our apperception if the eye remains unmoved"—that such studies cannot develop in teachers the right attitude toward children.

Children are studied as the naturalist studies specimens collected for that purpose. The child is weighed and measured, parts of the body are measured, and parts of these parts are further measured. The halves of the body and of the head, the limbs, the hands, and the feet are compared to see if they are alike. The cranium is scrutinized to discover if it is bossed or if it has a frontal ridge; the external ears to see if they are alike in form, if the antehelix is normal, and if the lobes are attached all the way down; the palate is examined to see if it is narrow, arched, or cleft; the eyes for orbicularis oculi lax and for epicanthis, and of course for myopia, hypermetropia, and astigmatism; while the body as a whole is searched for signs of chorea, rickets, malnutrition, and for lordosis.

That children should be examined in this way is not questioned. The teacher certainly should be able to recognize at once any very serious developmental defect or any marked signs of nervous disorder. Further than this he ought not to try to go. Were it desirable that as a part of his training he should be educated as a physician, the time now spent in preparation to teach would not admit of it. But even in the time allowed for child study great harm may be done by over-emphasizing this phase of the subject. Both of the methods referred to take away the interest of the teacher from the child as a living, sentient creature. They keep alive the error of the old catechism which taught that the child has a soul, implying that the child is a body. The child is a soul and has a body. His body may be studied in its machine-like functions, or as a natural-history specimen, but all such study must be secondary to the study of the child as a soul, as a spirit; and it is only this latter kind of child study that can strengthen the personality of the teacher by bringing him into "natural, simple, deep relations and fellowship" with children.

But even that study of children which seeks to understand the subtle processes of thought, feeling, and will, and which deals with the child as a soul impossible to study under the microscope, and with motives, interests, and powers incapable of formulation in terms of time and space, may fail to assist in the proper development of the teacher. As Goethe says, "the spirit in which we act is the highest matter." Child study, animated, as it seems to me much of it is, by the love of child study, and not inspired by love of and interest in children, must result in the growth of an entirely wrong attitude toward them. The effect of such study upon the minds and hearts of those pursuing it must be similar to the result of the study of nature upon Charles Darwin. He studied nature, not for the love of nature, but for the love of science and that he might establish certain laws. The result was a wonderful scientific achievement, but at what a cost to himself! He says in a letter written late in life that his study has rendered him incapable of experiencing the highest feelings of the human heart, the religious emotions, and has deprived him of feeling pleasure in poetry and art. He adds: "In my Journal I wrote that whilst standing in the midst of the grandeur of the Brazilian forest 'it is not possible to give an adequate idea of the higher feelings of wonder, admiration, and devotion which fill and elevate the mind.' I well remember my conviction that there is more in man than the mere breath of his body." This was as a young man. And he concludes: "But now the grandest scenes would not cause such convictions and feelings to rise in my mind."

I believe that those who study boys and girls for the love of child study, for the love of science, rather than for the love of children, will in time be obliged to confess that they have lost the power to appreciate the highest and the best that is in the child.

Neither the accumulation of facts about children nor the discovery of general truths of child life and development can add to the personal power of the teacher. The growth of this power can be fostered only by that study which arouses the feelings and develops sympathy and love for children ; for, as Professor Arlo Bates puts it, "what we learn we possess; what we feel we are."

Child study, then, in the training of teachers, should concern itself with children a great deal and with treatises about them much less; it should not attempt to establish general truths of mental and physical growth, but should direct attention to the individual for the sake of the individual; it should be so conducted that the interest will be in the child rather than in child study; and finally, it should be a culture study in the best meaning of the word "culture," striving to put the pupil teacher into harmonious relations and fruitful fellowship with children.

DEVELOPMENT OF THE SOCIAL CONSCIOUSNESS OF CHILDREN

BY WILL S. MONROE, STATE NORMAL SCHOOL, WESTFIELD, MASS.

Germs of the social sense — instincts and feelings — which in a more highly organized state give rise to social consciousness, have their roots low down in the species. Animals of many kinds are social; and a few facts may be borrowed from the literature of natural history that will be of service in interpreting the origin and development of the social sense in the child.

Following the classification of Ribot, four principal forms of animal societies may be noted: (1) Those in which the basis of the social tie is nutrition, as the hydroid popypes, animals in whom the social instinct exists in its lowest forms — the search for food, defense, attack. (2) Those based on reproduction — domestic societies and families — in which may be observed sympathy and the genesis of altruism. (3) Those founded on the attraction of like for like, irrespective of sex, in which are manifest for the first time true social tendencies, thru the habit of acting in common. They may consist of accidental and unstable assemblages, as is the case in the migrations of birds and insects, or of more permanent assemblages voluntarily formed and maintained in view of a common aim. (4) Those with a stable and complete organization, in which there is division of labor, solidarity, stability, and continuity thru several generations, as in bees, wasps, and beavers.

A study of the social tendencies of animals indicates that many of the elements of man's social consciousness are clearly derivative. Herbert Spencer is authority for the statement that communities of rooks have a rude form of government, recognize proprietary rights, and punish offenders; and that among ants there is, besides division of labor, a system of signaling equivalent to a rude language, and elaborate processes of mining, road-making, and building. Says the same authority: "Gregariousness is joined with some subordination, some combination, some display of the social sentiments. There is obedience to leaders; there is union of effort; there are sentinels and signals; there is some idea of property; there is some exchange of services; there is adoption of orphans; and anxiety prompts the community to make efforts in behalf of endangered members."

The utility and modality of the plays of animals and children suggest some striking reciprocal relations. This is forcibly reiterated in comparing the games of young and growing children with such researches as those of Professor Groos. Witness, for example, the striking parallelism between a game of cross-tag as played by children and the aërial antics of a flock of swallows.

Mr. W. H. Hudson, who has recently studied the social habits of South American birds, furnishes abundant evidence to show that social games and dances are indulged in frequently, and that they occur at other times than the selection of mates. He cites the frequent mystic cloud dances of hawks, swifts, and vultures; the mock fights of ducks; the wing displays of the jacanas, in which both sexes take part; the evening assemblies and aërial dances of the scissors-tail tyrant bird, in which several pairs will leave their nests and young to participate; the triplet dances of the spur-winged lapwing, in which two birds already mated will call a third to complete the set. These and many similar instances are cited in confirmation of the fact that play in the animal, as in the child, is a veritable instinct and of immense significance in the development of its social sense.

Normal men never live in isolation—neither at the lowest scale of savagery nor on the highest plane of civilization. The remains of river-drift men fully confirm the fact that they lived just as primitive and cultured men live today—gathered into social groups and communities. Beginning unconsciously, the social sense is preserved by natural selection, and when its benefits are perceived, it is consciously perpetuated. As Professor Giddings has so well stated it: "The groupings of the social composition are natural products of the physiological and psychological activities of individuals, supplemented by natural selection. They arise unconsciously, and their prevailing forms are established by unconscious adaptation to the conditions of life before the social mind begins to reflect upon them."

As the tendency to social life, as hinted in a previous paragraph, originated low down in the animal series, so many of the social organizations and institutions, as we know them today, have had their definite beginning far back in the period of savagery. "We have the same brain," remarks Morgan, "perpetuated by reproduction, which worked in the skulls of barbarians and savages in by-gone ages; and it has come down to us laden and saturated with the thoughts, aspirations, and passions with which it was busied during the intermediate periods. It is the same brain grown older and larger with the experience of the ages."

The most savage tribes, who roam about in detached bands living in movable huts, everywhere give evidence of the gregarious instinct and the sense of fellowship. Their federations may be loose, and the camp, rather than the soil, their fatherland; but they quite universally recognize allegiance to a chief. The social bonds may be the outgrowth of blood kinships or merely the result of congregate associations, habitual intercourse, mutual interests, and co-operation.

That most of our modern institutions are clearly derivative from periods of primitive culture a cursory review of the history of mankind fully confirms. Social organizations, for example, founded upon gens, phratries, and tribes, as Morgan has pointed out, are the oldest and most widely prevalent institutions of mankind, furnishing the universal plan of government to the most isolated quarters of the globe. The Grecian gens, phratry, and tribe, and the Roman gens, curia, and tribe, find their counterparts in the gens, phratries, and tribes of the American Indians. "As far as our knowledge extends, this organization runs through the entire ancient world, upon all the continents, and it was brought down to the historical period by such tribes as attained to civilization." Any study of the social sense in its archaic forms clearly reveals its remote origin, its universal distribution, and its abiding character.

The acquisition of social interests and institutions by the race are constantly recapitulated in the child. He not only inherits social aptitudes and tendencies, but he is born into a world of social forces, upon which he reacts from the hour of his birth. As Professor Baldwin has well stated it: "He is born into a system of social relationships just as he is born into a certain quality of air. As he grows in body by breathing the one, so he grows in mind by absorbing the other."

The social sense appears in the child when he recognizes and takes an interest in persons. This ordinarily takes place not later than the fourth month; and in spite of the weak memory which characterizes the early months of infancy, the child early evinces a sympathetic interest in the social family group. The late Professor Preyer relates that a child one year old was taken from home on a visit, and that on his return he paid no attention to the cat and dog, but at once manifested keen pleasure in the recognition of his nurse and the other members of the family. Miss Shinn reports that her niece on the eightieth day smiled and gave a joyous cry on seeing her grandfather enter the room; and on the eighty-fourth day she watched him out of the room when he quitted her after play, kept her eyes on him as he stood in the next room a few seconds, and gave a joyous crow when he turned to come back.

Those who have been much with young children will agree with Sully that "they are instinctively attachable and sociable in so far as they show in the first weeks that they get used to and are dependent on the human presence, and are miserable when it is taken from them. In this instinct of companionship there is involved a vague, inarticulate sympathy." The child's first lessons in social relationships are learned by imitating the actions of the members of the family. As Professor Baldwin puts it: "Everything that he learns is copied, reproduced, assimilated from his fellows; and all of them, including him—all the fellows, the *socii*—do and think what they do think because they have each been through the same course of copying, reproducing, and assimilating that he has." From the second year on, when the child takes such keen pleasure in having others do what he does, and sharing with him what he has, there are remarkable adjustments of the self to the social relationships. It is at the same time, too, that toys serve such a beneficent purpose in disciplining the ego and correlating it to environing actions thru play activities. All these activities of which he partakes in the family—and which he helps to create—react most favorably toward the healthy development of the social sense of the child. Indeed, no one factor in the early life of the child contributes more largely toward the development of its social consciousness than toys and playthings. Advocates of the kindergarten have long insisted on the educational value of toys; for, as Froebel pointed out in his *Mutter- und Koselieder*, it is thru play that universal life is mirrored to the child, and by "playing at" life that he grows unconsciously into an understanding of the truth, dignity, and purpose of life. The social experience which toys bring into the life of the child is wide in range and far-reaching in utility. Note, as Seguin has suggested, the fullness of heart and thankfulness caused by a bright toy, and how it awakens in the child a sense of ownership. "He does not understand the *idea* of property, but he *feels* it in his grasp — a feeling which he never experienced in the case of his garments; and once his possession is assured, he endows it with all the qualities of an ideal, and devotes himself to it as to a reality. True to his sympathetic conception, though his mind know it to be false, he — who never before looked into the future — opens this blank book of human imagination and writes on it all sorts of contingencies of which the toy is the magic spring and center." Since toys are such immediate means of experience between the great realities of life and the smallness of the child — a gap which can only be filled by a microcosm of playthings — it has seemed to me that a fruitful field of inquiry would be to ascertain from children the basis of their interest in and love for toys. The following test was accordingly given to 678 boys and 770 girls from the age of seven on: "What toys do you like the best for playthings, and why do you like them the best?"

The reasons given suggested the following scheme of classification for the favorite toys: (1) imitation, (2) emulation, (3) love of noise, (4) wonder and surprise. The first group — imitation — embraces 49 per cent. of all the toys mentioned. It includes such toys as enable children to repeat actions once witnessed and which touch at so many points the social sense. The group is represented by 15 per cent. of the boys and 34 per cent of the girls. Dolls are oftenest mentioned, being given by 68 per cent. of the girls and 5 per cent. of the boys. The doll interest, always strong with the girls, is strongest from nine to thirteen years; and, altho at all times weak with the boys, it is strongest from seven to eleven years. Doll's furniture, and playthings for dolls, have second place in the group. They are mentioned by less than one-third of 1 per cent. of the boys, and 51 per cent. of the girls. Vehicles — sleds, carts, and wagons — are third, with 30 per cent. of the boys and 10 per cent. of the girls; and toy dishes fourth, with less than one-half of 1 per cent. of the boys and 30 per cent. of the girls. Among the other toys classed in the imitation group are animals, tools, houses, ships, and soldiers.

The second group — emulation and the spirit of success — embraces balls, tops, marbles, kites, checkers, hoops, skipping ropes, cards, and skates, and includes 27 per cent. of the boys and 11 per cent. of the girls. The ball is the favorite toy of the group, being given by 53 per cent. of the boys and 20 per cent. of the girls. It is oftenest mentioned at the age of thirteen years. Tops have the second place, and are favored by 40 per cent. of the boys and 15 per cent. of the girls. Marbles rank third, with 33 per cent. of the boys and 4 per cent. of the girls. The spirit of emulation, chance, and rivalry, if one may judge from this study, is essentially masculine.

The third group embraces such toys as give pleasure by gratifying a love for noise, and in it are represented 9 per cent. of the boys and 2 per cent. of the girls. Fife, horn, and other wind instruments lead, with

17 per cent. of the boys and 6 per cent. of the girls; firecrackers and firearms second, with 21 per cent. of the boys and less than one-third of 1 per cent. of the girls; and the drum takes fourth rank, with 12 per cent. of the boys and one-half of 1 per cent. of the girls. Pianos, organs, and other musical instruments — none of them often mentioned — are included with this group.

The fourth group embraces all those toys which excite feelings of wonder and surprise, and it is represented by but 2 per cent. of the whole number of children tested, the boys somewhat in the lead. The group includes the following toys, mentioned in the order of rank: magic tricks, puzzles, jack-in-the-box; punch and judy, and magic animals.

The social circle widens when the child reaches the age of three or four years and mingles with other children. New social relationships — more complex in character — are formed. The interests, the passions, and the activities of his companions are reflected in and related to his own interests, passions, and activities; and the social sense is widened and clarified thru these new experiences and relationships.

In order to determine the social elements mediating children's likes and dislikes, I gave the following test: "What kind of a chum (companion, intimate friend) do you like the best?" The question was asked of 2,336 Massachusetts school children — 1,068 boys and 1,268 girls — between the ages of seven and sixteen years. The purpose of the study was to ascertain some of the elements constituting the social sense of children, and to discover the influence conditioning their predilection and aversion for companions and playfellows. The catalog of traits was neither as large nor as varied as might have been expected, and for the most part the children seemed to express their ideals with remarkable intelligence and clearness. The following from a boy of eleven is fairly typical: "For a chum I like a boy who does not use bad language, smoke, or mix with bad company; who will help me if I get into a scrape, and not run away like a coward; one who is an honest, upright, kind-hearted boy; one who will come and see me when I am sick and cheer me, and not a fair-weather friend, who sticks by me because I have good things, and not a friend who is always telling everything about me that he knows, and not one who is always hanging around me. Such is the chum I like."

The papers were collated along the following lines: age, sex, moral, physical, and mental traits; habits, and general characteristics. Age preferences were indicated by 134 of the children, 107 wishing a chum of the same age, and 27 an older or younger chum. The girls had stronger age preferences than the boys. Sex is mentioned by 591 of the children. Among the boys 235 want boy chums and 20 want girl chums; among the girls 328 want chums of their own sex and 28 want boy chums. Sex preferences are most pronounced between the years of eight to eleven. Size is mentioned by 89 of the children. The same size is desired by 58, and a larger person by 31. A girl of eleven says: "I would like a chum not too fat nor too slim, just between, with long, yellow hair;" and a boy of ten says: "I like a chum that is about my own age and size. If you would like to know why, I will tell you. If he were larger than I, and he wanted to climb a tree that I couldn't, it wouldn't be very pleasant. While, if we were just the same size, one could do what the other could." A pretty or handsome chum is desired by 5 boys and 14 girls, and special teeth, eyes, hair, and nose by 6 boys and 32 girls; and 15 boys and 55 girls want a quick or sprightly chum.

The favorite mental characteristic is good nature — a chum that is jolly and cheerful. "One who is full of fun," "one that don't get mad," "one with a bright, sunny nature," is desired by 141 of the boys and 228 of the girls. Fifty-eight of the children want one that is bright and talented, and 42 one that uses good language. The moral traits, as might be expected, lead. Four hundred and seventy-eight of the children want a chum that is kind, charitable, or humane, and 455 a chum that is honest, fair, or just. One is impressed in reading these papers with the importance of play in the formation of the child's standards of morality, as is illustrated by the lad of thirteen: "The kind of a chum that I like is one that don't cheat when you're playing ball. I don't like one that says you're two strikes when you're one, or says you're out when you're two strikes." Truthfulness takes third place among the desired moralities. It is more pronounced with the girls than with the boys, and increases with advance in years. Constancy comes next. "I like a chum who would speak just as nice of you back of you as right in front of your face, not one who would pretend to like you just to get something out of you; and then go away and tell tales about you afterward," is the ideal of constancy of one young miss. This, like kindness, is essentially a feminine virtue and is apparent only among the older children.

Unselfishness has fifth place among the moralities; affection, sixth; modesty, seventh; obedience, eighth; and courage, ninth. But 5 of the boys and 23 of the girls express preference for a religious chum.

A chum that is "not rough or quarrelsome" is desired by 418 of the children, the girls leading. Fondness for play is more desired by the boys than by the girls, and diminishes with both sexes as the children grow older; and one finds all sorts of play specialties enumerated. Says a girl of twelve: "I like a girl chum the best who likes to climb and do stumps." A chum that is polite, "has good manners," does not appear until the ninth year, increases as the children grow older, and is always more marked among the girls than among the boys. It is formulated by a boy of nine in these words: "I like a chum who has very good manners. Who never swears or lies, never uses vulgar words. Who takes off his hat at the door and wipes his feet at the door. Who always asks to be excused whenever he steps on anybody's toe. Who always lifts his hat when he sees anybody he knows." Thirty-six of the boys and 64 of the girls want a chum that can keep secrets; 91 of the boys and 8 of the girls one that neither uses tobacco nor drinks, and 73 of the boys and 17 of the girls one that don't swear. Dress and neatness influence 22 boys and 65 girls, and wealth 7 boys and 3 girls. Industry is not strong, but 23 boys and 36 girls expressing the desire to have a chum that liked to work. Among the general characteristics were classed "good chum," "respectable chum," and "nice chum." These terms are indefinite, and may mean one or a dozen traits. They are oftenest mentioned by the young children, and the girls seemed to have an almost undisputed monopoly of that much-used word "nice." The fact that both "good" and "nice" diminish with advance in years indicates that they belong to a period when ideas are not well defined.

During the adolescent period there is an apparent struggle between the real, actual self and the ideal self—a pretty strong desire to have a chum that embodies the traits they most desire, but which they are conscious of lacking. This struggle is well expressed by a girl of thirteen, who says: "I cannot tell the kind of a chum I like the best because I like to have two kinds. I like to have a friend to whom I can go and forget everything I would rather not remember in her presence. I mean by that a person who is never serious. I like also to have a friend who is just the opposite. One who is serious and can help me. I like it this way because of my two moods." And several children specify certain persons whom they like best for chums, because they differ from themselves—persons who are what they themselves are not, but what they would be—a sort of double that seems to suggest itself to the young mind during this period of inquiry and doubt.

The conclusions of such studies must be regarded as tentative rather than final, but the speaker heartily agrees with Professor Baldwin that "the only way to get a solid basis for social theory, based upon human want or desire, is to work out, first, a descriptive and genetic psychology of desire in its social aspects, on the one hand; and, on the other hand, the only way to get an adequate psychological view of the rise and development of desire in its social aspects is by a patient tracing of the conditions of social environment in which the child and the race have lived, and which they have grown up to reflect."

DEPARTMENT OF PHYSICAL TRAINING

SECRETARY'S MINUTES

FIRST SESSION.— FRIDAY, JULY 8, 1898

The department was called to order at 3 o'clock P. M. in the Universalist Church by the president, Dr. C. E. Ehinger, of West Chester, Penn., Normal School.

The first paper, on the subject "Effect of Exercise on the Vital Organs," was read by Dr. William T. Harris, United States Commissioner of Education, followed by Dr. Henry Ling Taylor, of New York city, on "Exercise and Vigor."

Dr. Lightner Witmer, of the University of Pennsylvania, spoke on "The Mental Factor in Physical Training." Discussion was led by Dr. Edward M. Hartwell, of Boston, Mass.

The committee on nominations was appointed as follows:

Miss Ellen Le Garde, Providence, R. I.
Miss Ada F. Thayer, Syracuse, N. Y.
Miss Mabel Pray, Toledo, O.

The committee on resolutions was appointed as follows:

Dr. G. W. Fitz, Cambridge, Mass.
Miss Alta Wiggins, Salt Lake City, Utah.
Miss Zue Brockett, Washington, D. C.

SECOND SESSION.— MONDAY, JULY 11

President Ehinger called the meeting to order at 3 o'clock, and introduced Dr. R. Tait McKenzie, of the University of Montreal, who read a paper on the "Influence of School Life on Curvature of the Spine." An interesting discussion followed, which was participated in by Dr. Fitz, of Cambridge, Mass.; Mr. G. Lane Taneyhill, of Baltimore, Md.; Miss Thayer, of Syracuse, N. Y.; Miss Le Garde, of Providence, R. I.; Miss Shrieves, of Milwaukee, Wis.; Superintendent Aaron Gove, of Denver, Colo.; Superintendent Edwin P. Seaver, of Boston, Mass.; Superintendent G. W. Johnson, of Andover, Mass.; Mr. Sanford, of New York, and Dr. Ehinger, the president.

"Play in Physical Education" was the subject of the second paper, by Mr. George W. Johnson, superintendent of schools, Andover, Mass. The discussion was opened by Dr. G. W. Fitz, of Harvard University.

The Committee on Nominations reported the following names of persons for officers for the ensuing year:

For *President*—Dr. George W. Fitz, Cambridge, Mass.
For *First Vice-President*— Dr. William Krohn, Illinois Hospital for the Insane.
For *Second Vice-President* — Miss Ellen Le Garde, Providence, R. I.
For *Secretary*—Miss Rebecca Stoneroad, Washington, D. C.

As advisory board to confer with the local committee at the next annual meeting:

Miss R. Anna Morris, of Cleveland, O.; Miss Mabel Pray, of Toledo, O., and Mr. Robert Krohn, of Portland, Ore.

The report was adopted and the nominees declared unanimously elected as officers for the ensuing year.

Dr. Fitz, chairman of the Committee on Resolutions, then presented the following report:

REPORT OF COMMITTEE ON RESOLUTIONS

In view of the kindly shelter we have had in this church, and of the very complete arrangements which have been made in our behalf by the local committee, we offer the following resolutions:

1. That the hearty thanks of the Physical Education Section are due to the trustees of the Universalist Church for their kind hospitality during the meetings of the section;
2. That the Physical Education Section offers to the local committee its heartiest thanks for the unusually complete and satisfactory provision made for the comfort and convenience of its members and for the success of the meetings.

H. B. Boyce,
Secretary.

PAPERS AND DISCUSSIONS

THE EFFECT OF EXERCISE ON THE VITAL ORGANS

BY WILLIAM T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION

It is well known that physical exercise affects directly the muscular system, and that the muscular system is not all of the body, nor, indeed, itself directly the generator of what may be called nervous energy. There is a nutritive process of digestion and a distributive process of circulation thru the heart and lungs and liver; the two forming a building-up function which restores, repairs, and increases the organism and removes the waste. There is, besides, a nervous organism which receives impressions from without and conveys impulses that react on the environment.

Physical training, as we understand it, deals directly and chiefly with the muscular system and with that part of the nervous system which conveys impulses from the brain outward thru the limbs to the environment. Physical exercise indirectly acts on the digestion and the circulatory system and on the nerves of sensation; and its relation to those other bodily functions is nearly or quite as important as the direct relation of exercise to the muscles and the acquiring of strength.

During the first fifty years of agitation on the subject of bodily training, connected with the rise of turner societies in Germany and the preaching of the gospel of bodily culture as auxiliary to intellect and will by Spurzheim, his disciple George Comb, and their numerous followers, we may say, without hesitation, that the doctrine of physical exercise was passing thru its stage of superstition and quackery. There was a sharp dividing line between the believers in hygiene and the old school of physicians, and this separation led quite naturally to dismal results. The doctors opposed, with blind conservatism, the new apostles; and the latter justified the attitude of the former by a radicalism equally blind and fanatical.

It is the glory of the present revival of physical exercise that it is led by educated physicians. It is a new movement of the highest importance—the establishment of a resident physician in each of our colleges as supervisor of gymnastics and recording inspector of physical development among the students. It means a synthesis of science with reform and the end of the era of quackery in hygiene.

Our civilization is so bent on the conquest of nature and the production of wealth that it perpetually strains its supply of nervous energy and produces disaster along this line. Here is the special problem of our time for hygiene to meet: how to restore and conserve nervous energy.

There are three factors here: first, the one of food and its proper assimilation; second, the factor of rest and sleep; third, the factor of exercise, muscular and mental. It is obvious enough that digestion requires nervous energy, just as muscular and mental labor do. Hence, digestion must be given time. It must not be encroached on by bodily exercise or by mental exercise. But what is the average amount of time required for this, and should it be total cessation from bodily and mental labor, or is light labor of both or either best for the digestive progress?

Besides the mistake of cutting off the sleeping hours at the beginning or at the end for the sake of physical exercise, there is an equally harmful mistake of bringing the hour of exercise close to the hours for meals. Just preceding or just succeeding a meal, any exercise of sufficiently energetic a character to cause the blood to leave the organs of digestion and fill the muscles of the body or the brain is injurious and tends to produce dyspepsia. The stomach needs the greater share of the nervous energy, and likewise of the arterial circulation. Dr. Sargent thinks that violent exercise should not be taken at a period so long as three hours after a meal, on account of the danger of faintness, which neutralizes the good results of such exercise. Provided the person has just taken violent exercise, the blood is diverted to the muscles and brain, and away from the stomach. The taking of food at this time, when the nervous system is depleted of its vitality, is considered unfavorable to the best action of the digestive functions.

The object of gymnastic training, it has been said often enough, is to put the will into the muscles. It is to give one such control over all his muscles that each act performed by the body is performed by the use of all the muscles which nature has provided for the purpose. The farmer or the blacksmith develops a few muscles and neglects others. The gymnasium is supposed to cultivate many muscles which remain rudimentary in the original man; and here, I think, is an item of compensation which makes up for a great deal of the deleterious results coming to the imprudent gymnast who is careless about the hygienic precautions just now mentioned in relation to eating and sleeping. The gymnast — and I mean by the gymnast one who has taken sufficiently violent exercise to develop to a considerable degree the muscles of the chest, back, arms, and the other limbs — the gymnast, I say, has acquired the power of putting his will into his muscles by a slight effort. The gymnast performs all slight bodily actions, such as rising from a chair, sitting down, walking, climbing stairs, swinging his arms, turning his head, everything, in short, that he does with his body, by using many more muscles than the untrained person uses. Hence it happens that one who has taken gymnastic exercise retains till old age the power of getting a maximum of exercise out of a minimum of bodily movement. Walking a few rods and running up and down stairs two or three times a day gives him as much exercise as the average farmer gets from two hours of farm work.

The great physical need of the pupil is relaxation ; the pupil needs to stretch his cramped muscles and send the blood in torrents thru his limbs, which become torpid with unuse. The pupil is in want of fresh air and of the deep inflation of the lungs that exercise in the open air gives. He ought to use his voice, too. The reformers propose to substitute calisthenics for the purpose of supplying all these wants. They will throw open the windows and let in fresh air ; they will have a system of well-devised movements which will give the needed circulation of the blood, etc.

Calisthenic exercise serves a good place in the schoolroom, but its most important function is not a physiological one. It is true that the blood is caused to circulate more vigorously thru the limbs and those parts of the body that have become partly torpid with sitting or standing still. But the chief demand upon the pupil in calisthenics is a requirement of him to strain his attention and exercise his will. It is a will training to a greater extent than a physiological training. The great distinction between work and play is this one: in play the mind is spontaneous, governed entirely by its own individuality; in work the will power is exercised to conform its individuality to some externally prescribed course of action. Calisthenic exercise is severe work, and not by any means a relaxation. But the child needs relaxation, and not merely a change of work, altho the change is of some benefit. Exercise of the limbs, in accordance with a prescribed formula, is not the thing that nature requires.

Our medical advisers who supervise gymnastic exercises are in process of correcting the evils and extending the benefits of physical education. Their best service is to be along the line of enlightening the student who is on the verge or beyond the verge of nervous prostration how to build anew his nerves. For they will teach him the function of sleep and amusement ; of rest before and after meals ; of the danger of following a mental strain of the will by another strain of the will directed to the muscles; of the danger of exercise late at night; of the danger of tobacco and alcoholic liquors. We shall have science instead of quackery. And in the anticipation of the arrival of all these good things, allow me to congratulate you on being the pioneers of the better, the new, physical education.

EXERCISE AND VIGOR

BY HENRY LING TAYLOR, M.D., NEW YORK CITY

The human organism seems to sum up a threefold evolution: First, ascent along the animal scale, with increasing complexity of structure and activity; second, the social, political, and economic evolution from the hunting and fighting savage to civilized man, a change to still greater complexity of relations, which, while it transfers the stress of activity in larger measure to the nervous structures, is still characterized on the whole by an active muscular life. The third evolution, that of the individual, epitomizes, in its earlier and later stages respectively, the general trend of the two preceding. This race and life history is registered in the bodily structure and tendencies, from which, as well as from experience, we may infer that man is by nature well adapted to a large measure of muscular activity, and poorly constructed for a sedentary life.

Exercise and vigor are married and cannot be divorced; this is also the direct teaching of bodily structure. The five hundred voluntary muscles make up nearly one-half the weight of a well-developed man. They are intimately connected by nervous filaments with the nerve centers, and thru these with nearly all the tissues and organs of the body. Besides the fleshy muscles, whose contractions cause evident movements of the bodily frame, there is an important and widely distributed set of muscular fibers of a different kind, which surround the blood vessels and hollow organs, and by contracting modify their length and caliber. These involuntary fibers are equally subject to the control of nervous forces, tho not to the will, and are largely dependent upon the activity of the voluntary muscles for their proper tone and function.

The fundamental, but almost unnoticed, work of the economy — the cardiac contractions, the respiratory movements, the adjustments of the muscular coats of the vessels and viscera, the maintenance of vital heat — calls in twenty-four hours for the expenditure of six times as much energy as the day's work of a man at hard labor. Upon the vigor and activity of the involuntary fibers largely depends the ability of the vessels and organs properly to perform their work, and to protect the body from deleterious influences.

In the muscle itself contraction produces heat, work, sound, and certain chemical and electrical reactions. There is a greater flow of blood to the working muscle; absorption of oxygen and nutritive material is increased; tissue change and the formation of waste are accelerated. Muscular irritability is lowered by diminishing the local supply of oxygen by admitting certain toxic substances to the blood, and by repeated stimulation. The conditions of health for a working muscle are, therefore, "a full supply of proper food and oxygen, unimpeded and sufficient drainage, and rest at due intervals" (Hartwell).

Considered dynamically, a muscle is a machine for converting the potential energy of its own substance into heat and motion. In muscular contraction four times as much energy is converted into heat as into work. The muscles and organs exist for and obey the nerve centers, as the soldiers of an army obey their officers. The muscles contribute, also, in a very important degree to modify these centers, as the general and his staff base their orders on the reports of their subordinates, and are dependent for their sustenance upon the service of the soldiers. Each is in fact, absolutely helpless without the other; for without soldiers orders cannot be executed, and without officers there are no orders to execute.

In health and under hygienic conditions muscular movements tend to improve the nutrition and growth of the muscles used; the blacksmith's arm is a familiar example. The larger muscles act like so many hearts, kneading and compressing the vessels and organs in their vicinity, and assisting the blood current, their own drainage and that of neighboring structures; even the bones participate to such a degree in the development of adjacent muscles that it is often possible from the size and structure of the bones alone to form a fair idea of the muscular life of their former possessor.

Only by somewhat prolonged and strenuous exercise are the lungs thoroly ventilated, unless by special pulmonary gymnastics, as the cry of an infant. Upon the heart and circulation the effect of exercise is most important; the tendency is to relieve the congestion of local areas, and to accelerate the circulation. The effect of exercise upon the digestive organs, upon the skin, and upon the organs of elimination is equally marked, and upon the nervous centers it is of vital importance. If a limb is amputated in early life, the corresponding brain area never reaches full development, and may be visibly shrunken. Every movement is registered in the nerve centers, and brings them into new relations and under new influences. The mind depends for its development upon the registration and comparison of sensory impressions; of these a considerable share is of muscular origin, but the character and amount of all sensory impressions are conditioned by muscular activity. Since the effect of exercise on the different organs and vital processes is so profound, it must and does modify general vigor, temper, mind, and character. Can you imagine a vigorous and beautiful physique or a thoroly capable and well-balanced mind, except as the correlative of the generous use of God-given faculties, including that of varied and thoro muscular activity ? An indolent or sedentary life is inevitably reflected in weak and flabby muscles, soft or brittle bones, deficient respiratory power, feeble circulation, an inactive skin, languid and imperfect nutritive processes, deficient reactive power, in a figure devoid of grace, an ungraceful carriage, and not seldom in an eccentric or sluggish mentality. In the absence of considerable vigorous use of the larger muscles, one must be content to go thru life withered in the essential elements of vitality and steeped in one's own stagnant and poisonous waste.

The special effects and general tendencies of exercise will depend upon the kind and amount of the muscular movements and upon many other factors. They are not always or necessarily beneficial. Movements involving mainly the smaller muscles, as in piano playing or sewing, are useless, or even harmful, as exercise. Movements of the larger muscles, especially those of the trunk, are the most desirable. Exercise does harm in most acute and many chronic diseases, in conditions of over-fatigue, or too scanty nourishment, in severe injuries, hemorrhage, and shock. When exercise is too severe for the reactive powers of the individual, it tends to waste, rather than to develop, his powers; where it is too monotonous or badly distributed, it may produce deformity. In many diseases, however, exercise, systematically and properly taken, is of incalculable benefit. What the individual, sick or well, usually needs is not exercise or rest, but exercise *and* rest in due proportion and in the proper order.

Keeping these fundamental facts in mind, let us briefly trace the rôle of exercise at the principal periods of development.

The infant, like the savage, starts out as an active being. All its crying and kicking and seemingly purposeless movements aid in the development of the individual, begun by the differentiation of a single cell, and carried on thru embryo, infant, child, and adolescent to adult.

At first an organism of increasing complexity is built up, later special powers are emphasized at the cost of others. Are strong and healthy organs developed when this spontaneous activity of the baby is habitually restrained and repressed ? The facts speak otherwise; the over-coddled, over-dressed, and restricted babies are the delicate ones. Nature has provided at the start for this necessary neuro-muscular training by an inborn impulse to movement which will develop and safeguard the growing organs, if the child is protected from ignorant interference, other conditions as to diet, fresh air, and sleep being normal. Even the savage mother, often obliged by her peculiar life to impose special restrictions upon her infant, is careful to permit the necessary exercise. In describing Indian infancy and the use of the portable cradle, Mrs. Fletcher says:

"It is a mistaken notion that the child is kept up all the time. Every day the baby is bathed and placed on a robe or blanket to kick and crow to his heart's content; but when the family cares call the mother away, he is put into the cradle with his arm free to play with the many bright beads that hang from the hoop that encircles the head of this little portable bed." In Africa the system of infantile physical training practiced by certain tribes is more vigorous. Mr. E. J. Glave gives the following description in the *Century:* "I note at Chikwa's that the little baby strapped to his mother's back has a rough-and-tumble time of it, but takes it all good-naturedly, and one hears very little crying in the village. The mother goes to the fields with baby on her back, bobs about four hours in the hot sun, weeding, hoeing, and doing general gardening; carries huge jars of water on her head; scrapes him repeatedly as she bends and enters the narrow, low doorways of native huts; gives him a thorough shaking as she vigorously pounds corn with a long wooden pestle; takes him by the wrist, ducks him in the stream till he is nearly suffocated, and then spreads him on a mat to dry."

The characteristic activity of the young child is shown in play, which is the spontaneous and joyous exercise of budding power, and in which motor activity, imitation, fancy, and the social instinct are deftly interwoven. The play of children furnishes not only amusement, but priceless mental and physical training. The child is practicing the scales of muscular experience in order later to select the chords and arrange the harmony. What the child mainly needs is opportunity; a place to play in, children to play with. Here the city child is placed at a disadvantage, since both these essentials are too often lacking, and the child is repressed in deference to conventional standards of decorum or to the convenience of the elders. Special attention should be paid to this informal motor education of the child during its most plastic period before the school age. One of our wisest men has truly said: "He who helps a child helps humanity with a directness, an immediateness, which no other help given to human creatures at any other time of their human life can possibly give again." With the school age come more conventional standards and more restrictions, essential no doubt, but rendering all the more imperative the relaxation of the recess, the recreation of the playground, and the freedom of out-of-doors, into which play, games, and, later, athletic sports naturally enter. At this point we are brought face to face with the question of a more systematic and formal physical training, namely, some kind of gymnastics. This is needed, in my opinion, especially above the primary grades; and because it does train the nerve centers, the intelligence, and the character, as well as the muscles — in other words, because it forms an essential factor of a solid education — it should take its place on its merits in the regular curriculum. This means for success intelligent, trained, and inspired teachers, and a coherent plan modified to suit particular circumstances—conditions essential in every branch of instruction. If you ask a horsebreeder how to train a horse, he will probably reply: "What kind of a horse, how old, and for what purpose?" It is impossible to breed or train an animal which shall at once be suitable for draft and for racing; nor will the training appropriate for a yearling be applicable to a three-year-old. With regard to a child the situation is similar; means must be varied to suit sex, age, race, social and other conditions. No cut-and-dried formula or system will answer. There is no ready-made prescription which will enable us to dispense with observation, experience, intelligence, and judgment in the application of established principles. Much relating both to principles and to their application remains to be worked out by pedagogic, gymnastic, and medical experts, for it will take a combination of all to produce the best practical results. Indeed, it is a favorite opinion of mine that the knowledge of the medical and sanitary expert should be drawn upon in all school matters, from the choosing of a site and the planning of a curriculum to the daily routine of school life.

Physical training without regard to the laws of hygiene is futile. You cannot accomplish everything by exercise any more than you can by diet, sleep, recreation, dress, fresh air, or mental occupation. What is wanted is a proper proportion between the salutary ingredients of life. The relation of physical training to hygiene will furnish a hint for correlation in the scheme of instruction. Its relation to voice culture and manual training may furnish others. One thing that has been established in the opinion of experts is the worthlessness of military drill for physical training in schools. The manual of arms is positively detrimental to the young. Proper physical training, while in the highest degree disciplinary and educational, will also assist in establishing a foundation of organic competence which will be of the greatest ultimate value to the individual, and, of course, to the community. Still, of the two kinds of physical training, the formal and the informal, the informal, under favorable conditions, is probably the most valuable for the effects on the vital organs, because it is more attractive, because it is pursued in the open air, because it is on the whole more varied and thoro, and because the child can get more of it. It also is educational, and it furnishes a kind of mental training that comes from informal contact with nature and life, and which can hardly be got from books, schools, or instructors.

I heartily agree with what has been said of the evils of competitive athletics, especially in adolescents; at the same time it must be admitted that they furnish an interest and incentive that we could poorly afford to lose. They emphasize physical competence, beauty, and courage, and the worth and dignity of the physical; they spread their inspiration among our young people, and fill a place in modern life comparable to that of the old Greek contests, so instructively described. They cannot be made to take the place of rational physical training, but they illustrate a worthy ideal, and their principal evils may be much diminished by discouraging a too narrow specialism, and by favoring the contests of groups, rather than those of individuals.

After the school and college years come the years of performance and the years of decline; the years of the repetition of the daily task and the years when the daily task may become a burden. Modern industrialism has imposed grievous restrictions upon our people. Excessive division and subdivision of labor make the daily round for the masses dull and one-sided; for another class the emphasis put upon the wits in the struggle and strain of competition often gives a fatal twist to mind and body; for increasing numbers the limitations of city life are added; for the majority, perhaps, false ideals and false standards of success are displayed. Solidity is sacrificed to keenness, power to penetration. Industrialism certainly has its brighter side and is, no doubt, a necessary phase of progress. Perhaps the plan is to elevate the race by killing off the unduly greedy, for those who sacrifice too ardently to greed are ruthlessly extinguished. Vital organs give way under the unnatural strain, and the community pays its annual tribute in wrecked and ruined lives.

What can exercise do for us during the maturity and decline of our powers? Much, if early training has been broad and thoro; something, when this has been deficient. Without waiting for the collapse, the wise worker uses a portion of his daily off-hours, his weekly rest, and his occasional vacation to round out his physical and mental experience, and to build up neglected or wasted powers thru new activities and avocations. It is well to emphasize contrasts; let us not carry our work into our play or our play into our work. Alternation is a law of nature. Those addicted to sedentary pursuits will find delight as well as vigor in excursions with rod, gun, or camera; in the cultivation of some taste or fancy for scenery, for rocks, plants, insects, or birds in their natural surroundings. Horseback riding is good; riding a selected hobby may be better. Such pursuits provide a perennial interest; sugar one's pill of physical training so that one is hardly aware of it; keep us in loving touch with our first mother, Nature, from whom we cannot long or widely stray without danger and loss. Besides giving us exercise in its best form without any necessity on our part for elaborating its details, such pursuits end by giving us new points of view and better ideals.

Walking over a hard, level sidewalk is one of the poorest exercises known to man, but hill and mountain climbing, and rambles across an uneven country, with their attendant fence climbing and ditch jumping, are among the best. These are within the reach of thousands who little suspect their possibilities for enjoyment and invigoration. This is the kind of exercise that will ventilate the lungs, strengthen the heart, aid the digestion, and eliminate effete material.

Still, it remains true that hundreds of thousands suffer from too much rather than too little exercise. Children of tender years are stunted in growth and development by the strain of daily labor in factory or shop, and, under modern conditions, the laboring adult is, perhaps, as often injured and deformed by his work as he is invigorated and perfected. For these, too, country rambles and excursions, with the emphasis on their restful and recreative sides, will bring refreshment and new interests.

Our people are just beginning to recognize the value of country life and occupations, combined with out-of-door employments for the defective and degenerate. By such means the idiotic, the insane, the dependent, and the vicious may often be reconstructed and redeemed. Dr. Wey, at Elmira, found that the vicious and incorrigible dullards of the State Reform School were physically defective. They respond to systematic exercise, and bathing, and a generous diet, and to nothing else. Dr. Spratling, of the New York State Epileptic Colony at Sonyea, reports wonderful results from removing the inmates of crowded institutions to the detached buildings of the colony, and putting them at farm work. He says he has seen epileptic seizures disappear into the ground thru a hoe handle. These are but samples of a most promising field that is only just beginning to be worked.

In advanced years comfort and refreshment will still come from the less active forms of out-of-door exercise, like gardening, driving, and rambles of moderate length. Happy he who in earlier years has acquired special interests and intimacies under an open sky.

Physical training, then, like training of the mind and heart, is for all ages and all conditions a most wholesome and necessary ingredient in the full cup of life. Are there higher ideals than strength, courage, service? Dare we neglect the physical in their cultivation?

We may, I think, safely conclude that man is formed for muscular activity, and that thru a wise use of exercise his organs and powers may be educated, strengthened, and refreshed.

INFLUENCE OF SCHOOL LIFE ON CURVATURE OF THE SPINE

BY R. TAIT McKENZIE, M.D., DEMONSTRATOR OF ANATOMY, MEDICAL EXAMINER, AND INSTRUCTOR IN GYMNASTICS, McGILL UNIVERSITY

In a series of examinations made last year in the Montreal High School, of boys varying in age from thirteen to eighteen, and averaging a little over fifteen years, I was struck by the number that presented some marked irregularity of growth; and on tabulating them I find that 20 per cent. had a marked lowering of the right shoulder, 3 per cent. had the left low, scoliosis was found in 2 per cent., lordosis marked in 5 per cent., and round shoulders in 3 per cent.; while the habitual standing position of 30 per cent. approached more or less closely to what Bernard Roth has aptly named the "gorilla type"—abdomen protruded, chest flat, and head shoved forward.

These defects are found not alone among school boys, for out of 204 college students of the athletic class examined at McGill twenty-nine showed these same defects, varying from slight unevenness of the shoulders to marked scoliosis.

In a much more extended series of cases than those I have been able to see, other observers have found similar results, and I may quote the name of Dr. Scudder, of Boston, and of Dr. Seaver, of Yale, who found about 6 per cent. of Yale students presenting more or less lateral deviation of the spinal column.

Admitting the frequency of this fault among boys—and every observer knows that girls are much more particularly liable to spinal weakness and deviations during the critical age of school life—does it not seem worth while to attempt its prevention, if the scientific, hygienic regulation of the hours of school life can be used for that purpose?

Perhaps an inquiry into the condition of the spine during the years of childhood will show better than anything else the way in which ordinary scoliosis—or, as I prefer to call it, "fatigue scoliosis"—is brought about. I may say, in passing, that the great bulk of cases are of that class. Other causes, such as rickets, paralysis, etc., are responsible for but very few scattered cases in comparison.

In infancy the spinal column is straight, or bent in a slight curve forward from hip to neck; the bones are not yet ossified, and present a mass of pliable, cartilaginous material, with small deposits of bone. Between the vertebræ the disks are very soft and compressible, and the ligaments pliant and easily stretched.

Immediately on assuming the upright position certain changes take place. A sharp forward curve develops in the lower lumbar region, continued up into the dorsum, so that the infantile curve is reversed, and the back is hollowed. Gradually a compensating curve in the dorsal region develops and increases, till the well-marked backward curve of the back is the result; and, by the time adult life is reached, a third develops in the cervical in the same direction as the lumbar.

It is while these curves are forming that the child's school life is passed.

The formation of the first, or lumbar, curve is helped greatly by muscular action: the great mass of the erector spinæ muscle, pulling back on the vertebræ of the lower part of the dorsal region, acts like a bow string, while the powerful psoas muscles springing from the front and sides of the vertebræ, and going down to the thigh, further help in the formation of the forward curve by being on the stretch when the child is in the standing position. The other curves are undoubtedly compensatory in character. The muscles that act on the spinal column are most intricate and numerous, the superficial layers consisting of long strands passing, some to ribs, but mostly from spinous process to transverse process of the vertebra. The deeper layers are shorter, and the deepest pass only from one bone to its next neighbor. Gray describes five distinct layers, each containing from three to twelve muscles. This apparent redundancy and unnecessary complication are, after all, the one safety we have in preserving the upright posture.

We know that, if we hold the arm out at right angles, the fatigue and pain at the shoulder soon become intolerable, and few can stand the test as long as five minutes. The main strain falls on one muscle, the deltoid, which has no relief from continuous action. The same condition would result in the back without this system of small muscles that keep working in relays, each slight movement bringing into action a new set, and relieving the tired ones. Without this ingenious arrangement the erect posture would be an impossibility. Anything that will interfere with this action of the muscles in relays will hasten the oncome of fatigue and collapse.

The constant desire for movement is the most striking quality of young animal life, human or otherwise—the play instinct so wonderfully understood by Froebel, and so sapiently applied in the games of the kindergarten to the development of the best physical powers of the child.

With his introduction to regular school life the child's physical troubles begin. He is made to sit still from three to six hours, with but momentary rests at long intervals. The play instinct, expressed by recurrent attacks of the "fidgets," has to be sternly suppressed by the teacher for the sake of discipline.

The rapid fatigue of the undeveloped muscles and compression of the unformed bone are enough to encourage and fix faulty postures; but if we analyze the writing posture, we can trace the progress from the normal to collapse in the position of pronounced scoliosis, or skewed back. I quote from Dr. Fahrner, whose description is so good that to change it would spoil it:

> Before writing begins, the children sit perfectly upright, with both scapulæ thrown back equally. As soon as writing begins, all the children move their heads slightly forward and to the left. Soon head after head drops with a rapid jerk from fatigue of the neck muscles. In a short time the back also collapses, so as to hang from the shoulder blades, supported by the upper arm. Then two types are seen, depending on the part of the book they are at. Those writing on the upper part support themselves on both elbows, and let the chest sink forward against the desk, and back becomes curved forward—the round back.

> The eyes are three or four inches distant from the desk, and the support is from three points—the left elbow, the chest, and the right forearm, slightly. When at the bottom of the book, they lose their third support, and have the left elbow alone, and add to these faults of position a twisting or screwing of the back toward the right. The head is bent toward the left shoulder, the right arm, with the scapula standing out like a wing, rests anywhere and lightly; the eyes are too close to the paper.

This is the process of collapse by tiring out the spinal muscles as you tire out an arm by holding it at right angles, and scoliosis is the writing position become fixed.

The evils of this "confinement with hard labor" are notably increased and made more dangerous by ill-fitting desks and seats.

This subject has been taken up so fully by more able and better-informed observers, such as Scudder and Hartwell in America, Cohen in England, and Fahrner, Eulenberg, and Bach in Germany, that I will do little more than mention the defects usually found, and name the remedies that have already been found efficient in combating these evils.

The seat may misfit in three ways. It may be too low, bringing the weight on the hip bones and cramping the knees; it may be too high, leaving the legs suspended in the air from the knees—a position that interferes with the circulation in the legs, and causes rounding of the back. The seat may be too deep, and the back is thus prevented from reaching the back rest, with rounding of the whole back as a result.

The desks may misfit in five ways:

When too low, the pupil must bend forward and round the shoulders.

When too high, the book is brought too close to the eyes, and the shoulder must be raised and the back screwed in writing.

When the desk is flat, or but slightly sloped, the head must be brought too far forward in reading.

In the placing of a fixed desk too great a distance between it and the seat results in some of the same defects as in a low desk—the forward bending and stretching in writing; while, if too near, the chest is cramped and respiration interfered with. With so many errors, it would seem a delicate matter to steer clear of them all and get the ideal desk, and if our children are to spend five or six hours a day on their seats, before these desks, it is surely a matter of the gravest moment that to confinement and fixity of position—evils in themselves—there be not added the crime of misfitting desks and seats, to accelerate weariness and hasten the production of the fixed scoliosis of fatigue.

The problem is to have a seat whose length and breadth are proportional to the under surface of the thighs and buttocks of the sitter; to place it at such a height that the sitter's feet may rest flat upon the floor when the legs are bent to a right angle, and to provide a rest that will support the sitter's back, whether quiescent or actively engaged.

The desk must be of the right height and slope. The under surface must not cramp the knees; and, above all, it must not be placed so far forward in relation to the seat as to require undue leaning forward in the sitter.

This last defect is shown in the normal dimensions given by Eulenberg and Bach, but was probably a concession to convenience as permitting the pupil to get in and out more easily.

A vertical line dropped from the edge of the desk cover to the chair seat is called the "difference," while the space between this line and the edge of the seat is called the "distance." If the desk overhangs the seat, the distance is said to be minus, if not, it is said to be plus. Remembering these two technical terms, it is easy to explain the points of a well-fitting desk.

The difference should be equal to measurement from the elbow tip to the seat, the forearm being bent at right angles and elbow to the side. The distance should be minus two inches, but if adjustable for distance, so much the better.

The desk slope is best at one in six inches.

The seat height should equal the measurement from the under surface of the bent knee to the sole of the foot.

The depth of the seat should enable the back to touch the back rest thruout. The back rest should have a projection for the loins, and should sweep backward to follow the natural curve of the back, and give the figure a slightly reclining pose.

If in the furnishing of a schoolroom the furniture cannot be made adjustable thruout, some at least in every room should be so made, and the others constructed on the model just laid down, the result of years of experiments and thought by skilled observers.

Even with well-fitting seats and desks the present writing position is such as to favor to a marked extent the formation of fatigue scoliosis or the permanent "screwed back." Vertical writing has been spoken of as a panacea for the "screwed back." It has been so strongly recommended by Cohen, of London, that he says, "with the slanting script one never knows whether a pupil has sat upright or not; with the vertical script he must have sat upright while writing." Dr. E. R. Shaw has pretty clearly shown this to be fallacious, but the fact remains that its adoption would tend to lessen the frequency of fatigue scoliosis, especially if care were exercised by teachers to keep the pupils rested and in good position.

The third point that tends to produce faulty posture, the starting-point of lateral curvature, is bad lighting of the schoolroom. If insufficient, we have at once the rounded back and stooped shoulders in the pupil who cannot see clearly. The same effect is produced when the windows are so arranged that the pupil sits in his own light. The windows should be placed high up, and the light should fall over the left shoulder, and never directly from the front or back.

Every school system should have a medical officer as adviser. His duties should be, in brief, somewhat as follows:

1. He should give advice in the construction of schoolhouses in matters of general hygiene, but more particularly in the lighting and seating of the schoolrooms.

2. He should inspect the rooms from time to time during school hours, to see that the pupils are not misfitted in desks or seats.

3. He should make a careful examination of the muscular system and heart and lungs, etc., in all pupils, before taking part in the rougher games, such as football and basket-ball, and keep a record of these examinations.

4. He should be consulted by teachers in all cases where they observe a tendency to curvature or weakness, or dullness of any of the senses; and they should then be examined carefully and a record kept.

These cases should be followed thruout their school life, and the teachers advised as to the defects. Where advisable, the parents should be warned and advised.

The school should be the place for the detection and prevention of faults in growth, but the treatment of these cases should be confined strictly to what Dr. Sargent has called "straight work," in which both sides of the body are equally used; and it does not fall within the province of the school specially to treat them, any more than it would to prescribe glasses for shortness of sight.

Such work is therapeutic, and requires special, individual medical treatment, which the instructor, when one is present, has not the time to give, even if he could and it were advisable. It is in such cases that the value of an adviser is apparent, and even these unfortunates that have passed unheeded thru the plastic first stages of scoliosis till the faulty posture has become habitual may by careful treatment be restored to the symmetry that is man's birthright.

DISCUSSION

DR. FITZ, Harvard University.—The question of scoliosis in schools is of perennial interest to all who are teaching and have charge of children. In my own experience, it seems to me that the influence of the desk is not so great as has been maintained, inasmuch as the attitude that the child takes is the same attitude he takes at home, and is very frequently the attitude he takes in bed. In the investigations which we have been making at the Children's Hospital in Boston we have found a great many cases where the scoliosis has been determined by the bed position. The child has had a uniform position in bed, lying upon the same side, and the sagging of the body between the supporting points of hip and shoulder has determined the curve absolutely, as shown by having the child lie upon the table in the habitual posture, and then reverse, making him lie on the other side, when the curve will have a tendency to be obliterated, if it has not become fixed by bony change.

Whenever a child suggests, by the retention of a posture, the question as to whether it is a habitual posture or not, the teacher should get information from the parents with regard to the position taken in sleep, and, if possible, have it reversed. Nearly all young children curl up in bed, and it will be of the greatest benefit if the teacher can correct that, by getting the parents either to straighten the children out or tie them out. The last suggestion is not a cruel one at all, for the children are very tolerant of rather extreme measures. They should be tied out straight, preferably in a back position, or alternately upon right and left side. The teacher should not be content with observing the child, and deciding that he has scoliosis, or has a habitual posture that may bring on scoliosis, but should go to the parents and investigate with regard to the other habitual postures, and, if possible, correct them. There are so many cases of round shoulders, of flexible spines with habitually depressed shoulders, or with a habitual twist, which can easily be corrected if proper steps are taken, that it is well worth while for every teacher to be on the lookout for them.

MISS LE GARDE, director of physical training in public schools, Providence, R. I.—I should like to speak of the plan which was tried in the Providence schools. As soon as one of the physical supervisors discovers a case of round shoulders, or lateral curvature, a note is sent to the parents of the child requesting them to meet the teacher and the physical director at the building. The average parent is only too willing to come and see what the state of the case may be.

The deplorable ignorance of parents as regards their own children is very apparent to any physical director. If the boys are found possessed of any physical defect, it is suggested that they attend a certain class — in the Y. M. C. A., for instance — where special attention is given to the cure of curvature, and other like defects. The girls are recommended elsewhere. One of the graduates of the Boston Hospital for Children takes cases of this nature, and an arrangement has also been made at one of the hospitals where charity cases are taken. This last year, since medical inspection has been put into operation, the doctor makes a visit to each of the schoolrooms, in company with a very broad-minded woman, who is at the head of the primary department. This is done at the request of the different schools. In this way the children are watched, and cases of spinal curvature noted. The teachers give most valuable aid in visiting the homes and helping in every way possible.

Adjustable desks are all very well; every schoolroom in the seven hundred or more rooms in the city of Providence has adjustable desks in the front and back rows, and the new buildings have all adjustable desks; but the trouble is that they are not adjusted, and the teacher seats the children indiscriminately.

AARON GOVE, superintendent of schools, Denver, Colo.—I am confronted now more and more, year by year, with curvature of the spine, especially of the girls — of which, of course, I know nothing except the fact of the bald statement. It has been suggested to me, in the course of all this work which we are doing, that curvature of the spine with our girls in the grammar and high schools perhaps can better be traced back to the piano stool than to the schoolroom desk.

I remember my ancestors lived and worked, healthy and healthful, to a good old age, and were vigorous and bright, physically speaking. Now, what is the trouble today? I don't know. I should be very glad, and, I suppose, I shall be forced, to urge the authorities with whom I work hereafter to supply nothing but an expensive adjustable desk. The very difficulty suggested just now is one which occurs constantly in practical work — not with those who investigate scientifically, but with those who work practically — viz., the necessity of changing pupils from seat to seat, for many reasons that occur in the administration of a schoolroom. I am troubled to know if this great change in the physical make-up of our girls is something that belongs to modern civilization and abuse, or if it must be traced directly to abuse in the schoolroom.

MISS THAYER, director of physical training in public schools, Syracuse, N. Y.—After watching the children of the primary and junior grades, and finding the worst cases of round shoulders, upon going to their homes to ascertain how they live, I find, in a very great many cases, that the children are taking care of little babies, their brothers and sisters; and, of course, after spending so many hours of the day at that kind of work, they have round shoulders. I do not see how we are going to correct that part of the evil. You can talk to the mothers, but these children have to be attended to.

With regard to the adjustable desks, I will say that we are using them in many of our new schools with great success. They are under the direction of the department of physical training, and the janitor changes them as they need to be changed. In schools where they have been introduced the children are straighter than before their introduction.

EDWIN P. SEAVER, superintendent of schools, Boston, Mass.—Mr. President: I am prompted to say that I do not feel quite as skeptical as Mr. Gove appears to feel about the benefits to be derived from some improvements in school furniture, and more use of the adjustable desks.

I will say this, however, that we have experimented with three or four kinds in my city, and we have not been perfectly satisfied with any one make. A committee was set at work about a year and a half ago, consisting of physicians able to deal with the subject, of which committee your associate here, Dr. Hartwell, is chairman. That committee has done a great deal of work in investigating the whole subject, and in trying to devise some simple form of adjustable furniture consisting of chair and desk. When that committee reports, its device will be public property.

But no one need be dismayed at the cost of these desks. It is not necessary to furnish the whole room with them. The lady who spoke a moment ago said that, in her schools, the front row and the back row were made adjustable, the rows being fixed in a single room. Our practice is to make two rows out of seven, up and down the room, adjustable. Those seats are used for the very large or the very small pupils, or the abnormally shaped pupils in any way; and then, by having three sizes of the standard furniture for the other five rows, we can manage to fit the children to the seats pretty well — so that the knee is not brought too high, so that the feet are not left dangling in the air, and so that the body is placed in the right relation to the desk — with a tolerable approach to accuracy.

GEORGE E. JOHNSON, superintendent of schools, Andover, Mass.—Mr. President: I wish to rise to a very brief point. The objection was made that, inasmuch as these evils which have been mentioned are not due to schools, or school work, we should not bother ourselves with trying to remedy them. I should like to know if that is really the attitude which we should take in the public schools.

Now, it is over two hundred and fifty years since Massachusetts made education universal and free. And one of the leading purposes of that action, as stated in the ordinances of the state, was that children should be trained to morality and good citizenship. And yet, crime has steadily increased in Massachusetts ever since, and especially during the last decade. Some people go so far as to say that the schools are to blame for making criminals. We do not believe that. But are we to rest satisfied with that fact? Are not the public schools to do what they can to prevent it?

Now, in the matter of the physical side of the children: the state has a big hand in our public schools; and it is supposed to train its children for the sake of the state. Are we to confine ourselves, then, to the intellectual side, and to remedying only the evils that arise in the schools; or is it our province to make the child better, so far as we can, in whatever shape we find him? If he is round-shouldered, no matter how he got that way, the fact is, he is round-shouldered. He is lop-sided. Shall we rest content or shall we make him straight?

DR. EHINGER, director of physical training, West Chester, Pa., Normal School.—I have been working for the past eight years in a normal school where we have given physical examinations to all the students, and I find, as most of those who make examinations do, that we have a great many cases of spinal curvature. Now, the unfortunate thing is this, that at the age at which we examine those students it is usually impossible to do very much for spinal curvatures that have been fixed for a long time, even tho those curvatures may not be due to any organic trouble — I mean organic in the sense of any bone defect; the vertebræ may be intact — simply beginning with muscular deficiencies, which, I firmly believe, might have been corrected had they been detected earlier.

Now, what does this mean? It simply means that we must, in some way, learn to detect these things a little earlier; and it is not a difficult matter, in my opinion, to detect the marked cases, even for those who have had no especial instruction, if they know what to look for. Therefore I believe in pressing this point of calling the attention of the regular school-teacher to the danger of spinal curvatures. If it is not detected early, you may usually make up your mind that there is not much to be done.

Several points, I think, ought to be mentioned. One is the mode of carrying the infant on the part of the mother or nurse. It is sometimes the cause of spinal curvature in the child, and parents ought to know it. Curvature is readily caused by carrying the child continually on one side, with the little arm thrown over the shoulder, and even by leading it, continually holding the hand upon one side.

One cause of spinal curvature of which we all know is that of the incorrect standing position. I believe that the attention of our students ought to be called to their habitual positions, since often these positions are more at fault than the desks. In the physical examinations of our pupils one of the most marked things I have noticed in the last three years, where there is no spinal curvature, is the unusual prominence of one hip. Of course, in exaggerated cases, there is the protruding abdomen, the head forward, and the difference in the hips; but you will notice in a large percentage of cases that there is an enlarged hip on one side — that is, the outline of the hip is much curved, while it is straighter on the other. If you go a little farther, you will see the difference in the height of the hips, and the height of the gluteal fold; also a difference in the shoulders, and perhaps a spinal curvature.

Another cause is the carrying of schoolbooks. When children take home regularly a number of books, and carry them usually on the stronger side, or put them in a satchel and swing them across one side, spinal curvature is likely to be induced, since the bodies are flexible, and the bones are in a plastic condition. Superintendent Gove has asked, What is the matter with our girls. What is the matter with our boys?— because I find that almost as many boys have spinal curvature as girls. *I believe it is due to a lack of muscular tone.* I believe there is not the muscular vigor that they ought to have. Of course, there are a great many causes; but the rapid increase of city life, and imperfect exercise and hygienic conditions, are among the causes.

DR. TAIT MCKENZIE, McGill University, Montreal.—As to the correction of physica defects, I do not think that the school is the place for the correction of scoliosis — after it has developed so as to require treatment, I mean. It is the place to prevent it, if we can; it is the place to do what we can in a general way, such as having the positions at the seats made better, and improving the standing position, as Dr. Ehinger pointed out; but it is not the place for the direct treatment, which, I think, is more of a medical specialty, just as is the correction of short sight, as I said in my paper.

The gentleman from Colorado, Mr. Gove, spoke about the straightness of our grandmothers. Well, I have heard that before; I have heard it from my own grandmother, about the straightness of the girls in her time. Of course we did not see them when they were girls, and we do not know. There were no measurements taken, either. I am inclined to think that, conditions being equal, there is no more curvature and no more crooked backs now than there were then. It is a point, of course, which can never be proved, one way or the other, as we have not the facts to go on. If there is any more, however, it is very likely due to this lack of muscular tone, brought out by Mr. Ehinger, I think.

When I spoke of the slanting back, I did not mean a straight back. I meant a back whose general position is slanting, so that the pupil, when at rest, is in a slightly reclining position, with a support at the loins, and the seat back following the natural curve of the back. I do not think it is necessary that the body should be poised on the two hip bones. I think that if we have that slightly reclining position, it can be held longer, with less fatigue.

PLAY IN PHYSICAL EDUCATION

BY GEORGE E. JOHNSON, SUPERINTENDENT OF SCHOOLS, ANDOVER, MASS.

Play as a factor in education is prehistoric; it antedates Adam. It is not known how low in the scale of animal life play occurs, or to what extent, but reliable authorities attribute play to animals no higher in the scale than the insects. Groos classifies the swarming of insects in the sunshine as *Bewegungsspiele*. Sir John Lubbock, in *Ants, Bees, and Wasps*, speaks of the games of ants. He says: "Our countryman Gould noticed certain 'amusements' or 'sportive exercises' which he had observed among ants. Huber, also, mentions scenes which he had witnessed on the hills, and which he says 'I dare not qualify with the title gymnastic, although they bear a close resemblance to scenes of that kind.' The ants raised themselves on their hind legs, caressed each other with their antennæ, engaged in mock combats, and almost seemed to be playing hide and seek." Romanes speaks of the love antics of spiders, as Darwin does of birds; but Forel, who corroborates the observation of Huber, says that the attraction of the sexes could not have been the cause of the play of the ants.

Dr. Hodge called my attention to the curious antics of bees which he had sometimes observed, a kind of ecstatic dance which suggests, in a way, the capers of a well-fed calf or of young lambs.

Probably there is no such thing as play among animals which necessarily devote their lives to the search of food; but with well-fed leisure appears the phenomenon of play. This fact doubtless influenced the theory, so widely accepted, that play arises from surplus energy. Anabolism being complete, and there being no necessity for the discharge in serious pursuits, the overfilled cells are discharged in mock purposes, or play.

This theory, which may be termed the Schiller-Spencer theory, is regarded by Groos, the author of *Die Spiele der Thiere*, as of great worth, yet insufficient. Play, in both animals and man, is often carried to fatigue, or even exhaustion, in which case the over-supply theory is inadequate. Play has its root in something deeper than momentary physical conditions; it is more than physiological, it is biological; it is an instinct with the deepest biological significance.[1]

The belief that play activity has its root in instinct is by no means novel. Professor James, in his chapter on "Instinct," catalogs what seem to him to be the most prominent of the tendencies which are instinctive in the human species, and in the list is play. In 1877 John Strachan, a physician of Edinburgh, issued a little book in which he endeavors to show that play is instinctive, and that it is nature's method of preparation for mature life, claiming that play activity alone is sufficient for the highest development of all the faculties, mental or physical. It has been the part of Groos to classify the play activities of animals and to trace each class to the instinct on which it is based.

That play is a preparation for future serious occupations is evident to the observer of kittens or young dogs. What cat could catch a mouse if it had not previously been trained in its play to crouch, creep stealthily, judge of distance, gauge its leap, and strike with its claws? The instinct of hunting in the lion or tiger would we of little use, when prey was near, if there had been no previous exercise in play of all the arts required in hunting. Animals play, says Groos, not because they are young; rather, they have a period of youth because they need to play.

The preparatory value of play is strikingly manifest in the games of savages. The games of the Teton-Dakota children, described by Dorsey, exercise the young Indians in the very temper of mind and powers of body needed in their maturity. The boys imitate the sun dance, cutting holes in their skirts instead of the flesh; they leap from high stumps or banks; play hide and seek among the trees; take captives, fighting roughly, but without anger; follow each other's trails in the snow or sand; make bows and arrows, and hunt with them; fight mud battles, in which they throw mud balls from the ends of sticks, sometimes injuring each other severely; and play many other games of warlike nature, often causing much pain to the players and imposing tests of courage, strength, and endurance. The young Ute Indians acquire much skill in making their toys — the boys bows and arrows, the girls dolls and pottery.

Granting the instinctive-biological significance of play, it is not surprising that play should powerfully affect the vital processes. There is a wide difference between the effect of uninteresting exercise or work upon the development of a child, and the effect of hearty play, which perhaps involves the same muscles. Not alone on the muscular, but equally on the nervous, system play has its effect. Dr. Irving C. Rosse, in the *Boston Medical Journal*, October, 1895, writes on the "Conservative Value of the Play Impulse." Dr. Rosse claims that in some forms of play is one of the best treatments of certain forms of nervous diseases. Chorea and hysteria, he says, have been cured by a course in swimming. Dr. Hartwell mentions the value of play with gymnastics in the prevention and cure of stuttering. "On account of their joyous, refreshing influence," says Raydt, "the place of games cannot be filled by gymnastics."

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[1] This explanation of play, which has been wrought out so elaborately in the remarkable study by Groos, has been most admirably presented by Dr. George W. Fitz in the *American Physical Education Review*, Vol. II, No. 4, December, 1897.

I have no thought of opposing play to gymnastics. Play is properly one department of physical education. What we need is a greater facility for and a more thoughtful use of play in the education of our children. From the nursery to the university the play of the child, the youth, and the young man is worthy of the most careful consideration of a consolidated committee of ten and of fifteen. The play of the kindergarten, if it does not need a complete overhauling, at least should be most carefully considered in view of the possibility of that need; the play of the schools between the kindergarten and the college is scarcely given a thought by anyone; and the play of the college runs riot. I do not need to speak to you of the loss we incur, on the physical side, from any neglect of play; the magnificent results achieved by the Greeks thru play, the temper and physique of English youth, developed on the playground, are proof enough of the value of play in physical education. Nor do I need to mention the mental and moral effect of play; all this has been done, far better than I could do it, in writings you all have doubtless read, notably those of Inspector Hughes. But, before passing, I wish to speak of one matter of importance. It is this:

The industrial and social conditions have greatly changed in the last half century, especially in New England. The marked tendency today is toward urbanization. Seventy per cent. of the people of my own state (Massachusetts) live in cities. Opportunities for play, such as were universal in the early days of Massachusetts, are not now offered, perhaps, to one-half of her children. No public-school question is without its social import, and we cannot afford to leave out of our consideration the social side of play in education. I believe we are encountering a mighty danger in the lack of adequate motor and will training in the case of our city children, and especially in the case of the children of the city poor. G. Stanley Hall says that it is the tendency of modern psychology to reduce most of the activities of the soul to some form of the will, and quotes Schopenhauer that the normal man is two-thirds will, one-third intellect; Robertson, that *doing* is an essential organ of knowing; Matthew Arnold, that conduct is three-fourths of life; Maudsley, that both character and history are written in the habits of muscles; physiologists, that a large percentage of all the energy of the body is used up in muscle work, nearly half the body by weight consisting of tissues contracting under volitional control. Ask any public-school teacher how much time she gives a day primarily to the developing of the intellect and how much primarily to will training, and what will be her answer? And yet "it can be easily shown," says Dr. Hall, "that the will is no less dependent on the culture it receives than the intellect. It is fast becoming as absurd to suppose men can survive the great practical strain to which our life subjects all who would succeed, if the will is left to take its doubtful chances of training and discipline, as to suppose the mind develops in neglect." Could a more suggestive word, or indeed a more timely warning, be uttered? At an age when boys formerly received will training in the work of the farm, in hoeing, mowing, raking, in odd jobs, making sleds, and repairs of every description; when girls once received a training of hand and will in housework of every sort, in quilting, sewing, spinning—we now get our city children to using the "insignificant muscles which move to the scribbling pen or wag the tongue." We seat children in chairs screwed fast to the floor, and command them to *think* when we ought to give them space for moving and set them to *do*. This need of muscle culture, in great cities especially, is an imperative one. "The greatest need of an individual or a nation," says Seguin, "is muscular power." And there is nothing else in the wide world, I believe, that could insure the brain and the brawn and the will of our future citizens as could the play of children. Our compulsory school laws keep our children in school five hours a day and forty weeks in the year, thinking, thinking, thinking, always thinking, never *doing*. They come in crowds too unwieldy for play. They stand around, they jostle, they push; they loaf at the corners of the street or shop windows; a thousand, thousand movements of cars, horses, people catch their eyes and attention, each to retain them but an instant, and then they are gone, preventing any continuous, persistent exercise of willed action or attention; in short, their play interests drivel and dwindle away, as it were, and with them most precious moments of childhood and possibilities of growth toward perfected manhood. I believe there is possible for every stage of childhood an activity earnest, serious, absorbing; an activity with a conscious inner ideal toward which the child may ever be looking. I should like to know the man who first called idle, senseless play "fooling." I think he must have been a philosopher. This "fooling" in children is suggestive of some physical vigor, but of a minimum of cerebral activity, and is, I believe, a reaction from the forced and uninteresting study we impose on boys. The Lord made it annoying to us, I could believe that we might arouse ourselves once in a while to a wiser attention to children as a matter of personal comfort, if nothing more. Did you ever see a young child, a two-year-old, "fooling"? How seriously, earnestly, absorbingly so young a child attends to his play! One might almost imagine he thought a world hung expectant on the outcome of what he was doing. Alas! it is only after boys get to school that they go to "fooling."

Speaking of the inner ideal in true play leads me to observe that it is this ideal that makes all the difference in the world in the child's activity and its value. With this ideal vivid enough in the child's mind he becomes self-directing in his activity, a living soul, not an animate machine. He grows from within outward, unfolds like the bud to full blossom, not by a plastering on of this or that from without. The difference is as great as that between molding in solid gold and veneering in gilt. And here we need a warning. It is very hard to draw the line perfectly between wisely and unwisely directed play. The kindergarten is at fault, I fear, in not allowing enough originality to the child. I am told that kindergarten children often need more direction and suggestion in their play at home than they did before. May it not be that kindergartens give an over-amount of attention to games as compared to free play? It is the positive, self-directing, and self-sustaining activity of play that is so efficient in will training. What is it that every great man has done? He has conceived for himself an ideal, and he has pursued it with all the strength of mind and soul and body. So with the child at play; he conceives his own ideal, whether it be a mud pie or a game of tag, and he follows it with all his might. Muscular power developed in the pursuit of an ideal—that is what is needed more than all else in physical education. City playgrounds and the play of city children are questions of national importance.

Not long since the editor of an excellent educational paper, in an editorial, deplored the fact that so much discussion was given to play as a factor in education without first defining the terms "play" and "work." No doubt he was right, and I have delayed too long in this paper to state what seems to me to be play. Play, in a sense, is not distinct from work; play involves work. As Dr. Brinton says, "the measure of the value of play is the amount of work there is in it," and I might add, as he does, in regard to children at least, that the measure of the value of work is the amount of play there is in it.

The boy who is building a hut in the woods and the girl who is making a dress for her doll are working with all their might, but are nevertheless at play, acting from "inner necessity and impulse," and from tendencies which are clearly instinctive. Moreover, it is the glory of play that it may not only prepare for future serious occupations, but does actually, in some rare and happy cases, develop into a life work. Art belongs to play, and he who paints or chisels or writes because he must is only following out a play impulse into and thru maturity. It is serious now, and for that reason and for dignity's sake, perhaps, should be termed work rather than play.

Again, play is more than an interesting exercise, and because an occupation is pleasurable, or even "fun," it is not necessarily play. Real child play is based on some instinctive tendency, and has, on the part of the player, no serious end other than the immediate pleasure of the act; it has always the element of "inner necessity and impulse."

For school children should be chosen so far as possible the games which are based on instinctive tendencies. Taking the list given by Professor James, we can base upon it some general classes of games:

I. Based on hunting instinct:
    1. Games of chase; e. g., games of tag.
    2. Games of searching or hunting; e. g., hide and seek.
    3. Games of hurling or throwing; e. g., quoits.

II. Based on fighting instinct:
    1. Games of contest; e. g., football.

III. Based on instinct of emulation:
    1. Games of emulation; e. g., racing.

There are other instincts on which play activities are based, but activities which do not necessarily appear in games. I distinguish between play and games. Play is the general term and includes games; but psychologically and pedagogically we may distinguish clearly between the two. Games are formal; play is informal. Games require two or more players; play may be wholly individual. In games there is prominent the idea of beating, winning; in play emulation may not be at all apparent. Educationally, play is a broader field than games, richer in information, executive power, and originality. Games give quickness, deftness, intensity, a high power of co-ordination as in what is commonly termed skill; play gives breadth, culture, grace, and high power of co-ordination as in artistic creations.

On the instinct of imitation is based an endless variety of plays, e. g., keeping house, playing school; on constructiveness, playing with tools, making toys, huts, dams; on the caring or tending instincts, pets, dolls; on acquisitiveness, collections. The physical-training teacher can join hands with the manual-training teacher, with the teacher of nature study, and the regular teacher, and pour all these activities on to do the work of education. We have been trying this very experiment with a few boys in Andover. Of about thirty boys, along the line of toys and games, one made skees; three, bows and arrows; four, peggies and peggy sticks; two, jumping standards; one, bicycle stand; two, fishline winders; four, swing seat; seven, boat; two, cart; three, windmill. Along the line of nature study and collections, one made a stand and frame for ants' nest; one, a cage for toads; six, aquaria; twenty, butterfly net; twenty-one, tadpole net; one, vivarium. For their homes, two made pigeonholes; two, a bookcase; one, footstool; When we consider that the boys played with the toys they made, that they stocked their aquaria, hunted butterflies and caught tadpoles with their nets, found occupants for their cages and nests, and watched and cared for them, we see that the amount of physical training involved is by no means inconsiderable. Play (as distinct from games) is not often emphasized in physical education, but it is of great importance. I am not sure that the finest specimens of physical manhood could be developed thru games, but rather thru play, toys, and activities allied to hunting, fishing, rowing, tramping. Yet we need both, and we can have both. If such work should be taken up in connection with regular school work, it would not only avail much for the physical welfare of our school children, but would equally serve the mental and moral natures, and go far toward making that much-needed connection between the school life of today and the out-of-school and home life of our children.

Hampered as so many of us are by city environment and other disadvantages, we can, nevertheless, take suggestions, I believe, from the free, old-fashioned plays of children — the making of mud cakes and dolls' dresses, sand-pile farms and miniature roads, tiny dams and water wheels, whittled-out toys, sleds, and dog harnesses, the flying of kites, the pressing of leaves, gathering stones, collecting stamps and butterflies; and hope that some day the Lord will show us a substitute or find a way for all children to be blessed by membership in that school to which, as Maurice Thompson has said, "the greatest philosophers, scientists, artists, poets of the world of all ages have shown their gratitude and indebtedness, the school from which the greatest thinkers have been graduated, the school of the woods, the fields, the hills, the streams, the out-door play school of childhood and youth."

To recapitulate: Play activity is rooted in instinct. It is a law of life, obedience to which prepares for the serious occupations of maturity. As a generator and conservator of nervous energy, it surpasses all other forms of exercise. As a character builder it produces strength and positiveness of will. It is especially needed in the education of the children of the city poor. Play should follow deep-seated and well-defined hereditary tendencies of the human species. Not only games, but what may be termed, in distinction, play, should be utilized.

DISCUSSION

DR. G. W. FITZ, Harvard University.— Mr. President, and members of the association: I have listened with much interest to Mr. Johnson's paper, which has given us a very valuable analysis and discussion of the characteristics of plays and games, and their educational contributions. The biological influence of play in the development of the powers of individuals, human as well as animal, cannot be overstated. I agree very heartily with Mr. Johnson's statements regarding it. Teachers should certainly be brought to realize what a lever is given them for developing the character of children, and for giving them the essential education which is the right of all individuals. As Mr. Johnson has so well brought out, play develops power — the power of the individual to adapt himself to given conditions — as no other activity can do.

The child who is engaged actively in play is under no one's direction. He is directed by circumstances. To get their directions he must observe quickly, intently; he must make judgments based upon his observation; he must initiate the motor reactions which will enable him to adapt himself to the conditions observed. The child is developing his power by every bit of play, and especially by all active plays which require strong movement.

Tag is one of the most educative of plays, for it brings about an instant control of the body thru balancing, sudden stopping and starting, and a general control of force, such as only games demand. Teachers of gymnastics tend to over-emphasize set drills because they are pretty and effective for exhibition purposes, and to decry the value of play — to feel that in play there is no discipline. The teachers who have not made a special study of physical training are still more afraid of play, and are still more anxious to have what they call discipline in the schools.

Unfortunately, however, the ordinary discipline of the school is not the true discipline. Only too many teachers occupy the position of the first-year primary teacher who, when asked if the kindergarten children did not seem more active and wide-awake than the other children, replied: "Yes, they do! They give me trouble enough at first, but it isn't long before I make them understand that they've got to keep still and do as *I* say." Discipline becomes synonymous with repression. The negative aspect, "Thou shalt not," is alone presented. We must remember that true discipline is not repression, but is the self-control of execution; that the child should be trained to direct his energies into productive lines, rather than made to feel that his chief aim of existence must be to repress himself.

On the other hand, under the influence of play the child gains control of himself. He gains the power of adapting himself to given conditions with ever-increasing efficiency; he feels that upon himself rests the full responsibility for what he does. The result is that he is trained in character, trained in will, trained by the ever-present possibility of failure to hold himself steadily to a purpose — trained in that natural school where failure is so vivid that the struggle is always for success.

A word with regard to the amount of time which may be safely devoted to play in the early years of school may not be out of place. The opportunity for play furnished by school in the recesses of ten or fifteen minutes and the short time after school is ordinarily totally inadequate; yet, as has been shown, the requirements of modern civilization and the environment of city life, have restricted the opportunities for play so largely that they must be given by the school if they are to be given at all. The school, in its function of giving to the child what is necessary for development, should give the opportunity for play, just as it gives the opportunity for developing the number sense, or for learning to read.

The question of time for play hinges very largely upon the distribution of time for other work. All the efforts to introduce physical training into the schools today are hampered by the feeling of teachers that the time given to arithmetic, reading, writing, and nature work must not be interfered with. The physical-training work may have five or ten minutes a day, or perhaps fifteen minutes every other day, or twenty minutes a week. It is needless for me to say that such an amount of time is entirely disproportionate. The child's entire development, physical and mental, depends so largely upon activity that it is not too much to ask that the opportunity for physical activity should take up half the time in the ideal primary-school program. Moreover, I think that it will be demonstrated within a very few years that this time can safely be gained by taking half the time now given to work in arithmetic and reading in the first and second years of the primary school. No loss whatever will result to the advancement of the child in these lines. We are now trying to train mental faculties which have not yet developed, with the inevitable result that that time is wasted in drill which should be devoted to bringing out fully the play impulse of the child, to developing his observation and motor ability along the lines offered by plays and games, gymnastics, manual training, drawing, and similar activities.

We, who are interested in physical training, should make an effort, not merely to crowd in physical training, but to reduce the amount of time given to other studies, that the child may have the opportunity for physical activity broad and rich enough to bring out all his powers.

A MEMBER.—Mr. President, does Dr. Fitz mean play in our schoolrooms, with our desks, our tables, our chalk boxes, etc., in place of recitations?

DR. FITZ.—Mr. President, I do, most decidedly. I mean play in the best places we can give our children—if necessary, in the schoolroom. If it is a roof playground, as they are coming to have in New York, then on the roof; if in the basement, then in the basement, if it is well lighted and aired. But wherever it be, let us try to give to the children that which will develop them fully, even at the sacrifice of so-called recitations which sometimes do more harm to the children than good, by reducing their interest, by chaining them to the words of the teacher or book for their sources of knowledge, by reducing their physical vitality, and by deadening their nervous organizations and their play instinct.

THE MEMBER.—I should like a practical illustration of play right in the school hours, and in the schoolroom. I wish you would describe something that actually has been done.

DR. FITZ.—I think children have not changed so much from the time when I was a child. I remember distinctly playing in the schoolroom.

MISS STONEROAD, director of physical training, public schools, Washington, D. C.—It is really surprising how much we can do in the way of play in the schoolroom. A teacher who puts her mind to it can adapt to the conditions of the room many old plays and invent new ones. We have just lately been playing "follow my leader," which the children delight to do in the schoolroom. After walking in line they vault over the seats, run and jump to touch a high point on the wall, skip sideways, stoop down and touch the floor, clap their hands in time with the leader, vault sideways as they pass by desks, etc. This is ideal play in the schoolroom, because the child takes the initiative, and it becomes spontaneous play. The leader proceeds to do anything which suggests itself to him. However, when first played, the teacher acted as leader, and having made many excellent gymnastic movements, these are remembered.

The old game of "tag" can be varied to suit the room. We have made one variation which we call "sitting tag," in which one child is chosen as "old man" for every two rows. The children jump out of their seats, and when the "old man" comes to them, they quickly sit, and jump out again when he leaves. Every child in the room is playing at the same time and having a good time. When the teacher claps her hands, as a signal to stop, their minds are quickly turned in another direction.

The greatest difficulty lies in inventing plays and games in which all can join at once, and get good physical exercise out of the five or ten minutes devoted to them. Many plays advocated for the schoolroom can be played by only a few, which is unjust to the others who are obliged to sit and look on.

A MEMBER.—Do the plays go clear thru the school course, up to the high school?

MISS STONEROAD.—No; we do not attempt schoolroom plays in the upper grades: merely in the primary schools, our first and second grades. In the higher grades it is our desire to make the recess plays and games complement the physical gymnastic work which we do in the schoolroom. I doubt the wisdom of having play in the rooms of the higher-grade schools; but in the primary schools the teacher can play with the children, so that the work really is an advance on the kindergarten plays and games.

MR. BALLARD, of New York.— Mr. President, I have noticed a peculiar condition in children in different sections that has interested me very much. When I went to school, I went to several small country schools, known as "district schools," and in those play was very common. We went to school early in the morning, as early as we could get our breakfast, when we were little folks, for the sake of playing — bearing in mind the distinction between *play* and *games* that has been made here today. It was purely play. And in all of the different schools where I went the condition was just the same. We went to school early in the morning; we stayed at noon, if we could only take our dinner; we were happy, so that we could play — *play*, pure and simple. We would stay long after school for the same purpose. When we got a little older, I remember that the play was stopped almost entirely, and games were played — vigorous, active, running games. I remember one in particular that seems to me now to be an ideal game. We called it "goal." It was a very vigorous, running game, calling for a great deal of quickness and alertness and endurance and good judgment; and we played that game year in and year out. I found that that or similar games, were played in the different country schools — purely country schools.

In the district schools that I taught there was that same condition of affairs. The children came early in the morning, and stayed after school, to play; while the older scholars very soon took up these more vigorous games.

After I entered a somewhat larger field, however, and went into large villages, I found an almost entire absence of play, and an entire absence of games. I went to a still larger place, and there the condition was still more marked. The children never came to play, and they never played games.

Now I remembered my schoolboy days, and while I was a little too old to help them very much in play, still I thought I could start them with games. I know one that I started was "hare and hounds." I thought that was a particularly good game, and I started the boys on it in the first village. Well, the boys liked it, and they would play at "hare and hounds" *whenever I would run with them.* If I would be one of the hares — and I was not very fleet-footed — they would be the hounds; or, if I would be the hounds, they would join in. And we had our runs, runs that would rival those of Tom Brown of Rugby. We would run all over the country, and were known in all that section. But after I went away that game dropped dead. They never played it again. And in the next place where I went they had no games of the kind. It was almost impossible to get the boys to play a game; but I started them with "hare and hounds," and they played it just as long as I would run with them. When I began to feel that I had run at "hare and hounds" about long enough, they dropped it; and the boys have not played at "hare and hounds" for years.

Now, what is the reason for that? There must be some reason. I think that that is somewhat characteristic — that if you go back into the country, in the district schools, you will see this play among children, you will see the games among children; and if you go into the larger villages, near the cities, where they have plenty of room to play if they wish, you will not find it. I know that, in the case of our boys, they never played but one game in the yard, and that is the meanest that was ever invented — there is not a good quality in it — the game of marbles. They will play marbles in the spring; and that is the only game that they ever think of playing.

G. W. JOHNSON, superintendent of schools, Andover, Mass.— In regard to the games to play, I think any teacher can easily get up good games by watching the children, or remembering the games that she used to play, or used to see children play. As for the use of the schoolroom, there is much more that can be done with an ordinary schoolroom, full of desks, than one would naturally think. There are a great many tag games and games of racing that can be played in an ordinary schoolroom. For instance, you can take two children at the head of the schoolroom, and start them down — one goes down the center aisle, and turns to the left; the other goes to the right, and then comes up the center aisle, and they touch a mark on the blackboard, perhaps. There is a race course. You can have three or four children on a side, and have a regular team race, a relay race, with them. You can set them to hopping, in the same way as racing; you can vary it in almost an infinite number of ways.

The game of "drop the handkerchief" on the desk goes very well. Then they play what they call "going to Jerusalem," where a certain number of the desks are marked off, so that no child can sit in them, and then they march around the room and scramble for the seats.

As to the play of children in the country being more general than that in the city, I must say that it is very true, and it is a thing of great importance and significance, it seems to me. As I said, children come to city schools too unwieldy; a crowd rather dampens play in children than increases it. I think the case which has been given is rather an extreme one; but I know that leadership counts for a great deal among children.

Miss Sisson, in the *Studies in Education* gotten up by Professor Barnes, gives some very interesting facts in regard to leadership in the kindergarten children, the free plays, and the plays the children took up spontaneously outside, entirely without direction. Once in a while a boy or a girl comes forward as a marked leader of children in their games; but I never knew a case where, if one leader was gone, there would not be another one.

I never attended a big school in my boyhood. I do know this, however, that a large crowd of children in a small playground is apt to dampen the ardor of the play; they are too unwieldy. I think what Mr. Ballard said was very suggestive, however, of the important place a teacher may take in the plays of children. Some are timid, and do not find it easy to get out to play — the boys are rough, and they are afraid. Take the boy who has a very active mind, but a very sluggish body, to whom reference was made. He is probably afraid to enter the games; and it would be a good thing to turn him on to some outside play — get him a fad of some kind, like collecting butterflies, or get him interested in woodwork. There is some interest in that boy of bright mind that you can tie him to, and if you tie him to one thing, it will spread.

PRESIDENT EHINGER.— One thought occurs to me, and that is this: Has not the modern tendency to athletics something to do with changing this play spirit among the older boys in the larger towns, and in the cities? I believe in athletics myself — directed athletics — but it is my belief that the extreme athleticism that we sometimes see has something to do with abolishing these little so-called "childish" games and plays; and those boys who have not any particular bent in athletics, and are not ready or fitted to train for anything, usually drop out; and they are, of course, the larger number.

DEPARTMENT OF NATURAL SCIENCE INSTRUCTION

SECRETARY'S MINUTES

FIRST SESSION.—FRIDAY, JULY 8, 1898

The department met in St. Paul's Lutheran Church, corner of Eleventh and H streets, at 3:15 P. M., and was called to order by the vice-president, Mr. Charles N. Cobb. Prayer was offered by Rev. S. Domer.

In the absence of the secretary, Professor C. J. Ling, Mr. W. P. Hay was appointed acting secretary.

The vice-president then announced the following Committee on Nominations:

Professor E. H. Hall, of Harvard University.
Professor C. S. Palmer, of Colorado State University.
Professor A. P. Brigham, of Colgate University.

On Resolutions:

Professor Sydney T. Skidmore, of the Philadelphia Normal School.

Owing to the absence of Professor P. C. Freer, his address on "The Relation of Science Education in the Secondary School to That in the College and University" was read by Professor E. W. Lyttle.

The second paper, on "The Teaching of Biology in the High School," was read by Mr. W. P. Hay, of the Washington, D. C., high schools.

The preliminary report of the standing Committee of Ten was read by the chairman, Professor E. M. Hall, of Harvard University, who also read the report of the Subcommittee on Physics.

The report on chemistry, which had been prepared by the subcommittee's chairman, Professor Alexander Smith, of the University of Chicago, was read by Professor C. S. Palmer.

The report of the Subcommittee on Botany, which had been prepared by Professor John M. Coulter, of the University of Chicago, was, in his absence, read by Professor B. D. Halsted, of Rutgers College.

The report of the Subcommittee on Physical Geography was read by Professor Albert Perry Brigham, of Colgate University.

A motion was made and carried to accept the reports of the main and subcommittees as reports of progress.

On motion, the section adjourned at 5:30, to meet again at 2 P. M., July 9.

SECOND SESSION.—SATURDAY, JULY 9

The department was called to order at St. Paul's Lutheran Church by the vice-president, at 2:30 P. M. It was announced that the report of the Subcommittee on Zoölogy had been transmitted by Professor Ward, its chairman. It was read by Professor C. S. Palmer, of Colorado.

On motion, the report was accepted as a report of progress.

It was moved and carried that the co-ordinating science committee instead of consisting of all the members of the five subcommittees, shall consist of the chairmen of the subcommittees and the general secretary of these committees, and that this committee of six shall have authority to make a co-ordinating report to the department.

Professor E. H. Hall, as chairman of the nominating committee, submitted the following report:

For *President*—Mr. Charles N. Cobb, Regents' Office, Albany, N. Y.
For *Vice-President*—Professor A. H. Tuttle, University of Virginia.
For *Secretary*—Professor C. J. Ling, Manual Training School, Denver, Colo.

By unanimous vote the secretary was instructed to cast the ballot of the department for the nominees. The ballot was so cast, and they were declared elected.

In the informal discussion which followed remarks were made by Professors Hall, Palmer, Tuttle, Brigham, Lyttle, and Harrington, Messrs. Harvey and Albright, and Miss Parker.

A resolution tendering the thanks of the department to the pastor, officers, and members of St. Paul's Lutheran Church for their courteous and kindly action in granting the use of their church building for the meetings of the department was submitted by the Committee on Resolutions, and was unanimously approved.

It was moved and carried that the minutes of the meetings be subject to the approval of the chairman.

Moved and carried that the bill of expenses submitted by Professor C. J. Ling, per C. S. Palmer, be approved.

The department adjourned at 4:30 P. M.

W. P. HAY,
Secretary pro tempore.

PAPERS AND DISCUSSIONS

THE TEACHING OF BIOLOGY IN THE HIGH SCHOOL

BY W. P. HAY, M.S., CENTRAL HIGH SCHOOL, WASHINGTON, D. C.

By all who have given the matter serious thought it is agreed that the principal aims of the high-school course in biology are to educate, to instruct, and to foster a love of nature. There are many points included under these three heads, and, while it is not at all in the province of this paper to go into detail concerning the pedagogical value of biology as a science, it is necessary briefly to enumerate some of them.

"The development of the habit of observing and of observing correctly lies, of course, at the bottom of all scientific work, be it biology, or chemistry, or physics, or what not. The ability to distinguish from among the things observed those which are essential, to know the difference between those which are real and those which are only apparent, is a quality still more valuable. And lastly, the mental habit which can come best from the study of living organisms, and which demands the most searching investigation into all phases of a question before there is any willingness to come to a conclusion, is one which will do more toward making of our pupils good men and women than any other thing which they can get in school. Our students, when they reach maturity, will be less ready than men now are to follow the demagog or believe in every pleasing and apparently convincing argument presented to them. We have given them the training which has fitted them for investigation, and they will not be willing to take on faith anything which they can prove for themselves."[1]

While it is generally admitted that this educative or disciplinary quality of biology is its most valuable feature, there is no one who has altogether lost sight of the cultural value of a knowledge of the science. Pure information upon biological subjects should form no inconsiderable portion of the course. Such instruction was formerly the only kind attempted, and today it is the only kind given in many of our schools. The demand for it was based upon a distinct need, and our enthusiasm for the more important work must not cause us to overlook this altogether.

The third purpose of the biological course — to foster a love of nature — is only too frequently lost sight of by our high-school teachers. Instead of a course of study which will draw the pupil to the subject, interest him, and make him anxious to go deeper into it, the work is so arranged and carried out as effectually to kill any desire to know more about either animals or plants. Every child has, when he comes to us, more or less of a love for nature in his heart, and our aim should be to take hold of this and develop it, not with the idea of making naturalists of all our pupils, but that they may leave us with a greater love for nature, a better understanding of her laws, and an appreciation of her benefits.

As to the best means for attaining these results there is little difference of opinion. To make of biology a disciplinary science, to make it develop the reasoning faculties as well as the memory and powers of observation, it must be studied in the laboratory and the field more than in the class-room. The student must be compelled to find out for himself, and up to the limit of his ability do original work. He must be made to feel that successful investigation depends upon his own efforts, that the only way to learn is himself to get to the bottom of things.

It must not be understood from the foregoing statements that it is presumed for a moment that the pupil is to be thrown on his own resources altogether. He will need a great deal of help from his teacher, his laboratory guide, and from books of reference. The help given him, however, should be help in the sense of making him stronger. The teacher who can answer with a question, the laboratory guide which gives no opportunity for the mere verification of its statements, are what is required, rather than information. The equipment of the biological laboratory should be as complete as can be afforded by the school; it should be as liberally provided for, at least, as are the physical or chemical laboratories.

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[1] B. W. EVERMANN, *Inland Educator*, February, 1898.

"While it is doubtless true that with a very small outlay for apparatus more good work can be done in biology than in any other science, and while there are some teachers who can get enthusiastic work from their classes with no laboratory equipment whatever, it cannot be argued that under any conditions increased facilities will not result in better work. Good and honest work can be done in a poorly equipped laboratory, but this assumes that there is on the part of the students a disposition to work faithfully in spite of disadvantages, an assumption which is by no means justified by the facts."

The furniture of the biological laboratory should be carefully considered and planned for its intended uses. There should be solid work tables, with drawers or lockers for the reception of instruments, notebooks, and laboratory guides, and jars to hold unfinished work. An ample water supply close at hand in the laboratory is imperative.

The use of the compound microscope in the high-school course is often criticised, and when the use of this instrument is carried so far as to exclude all work in gross anatomy, the criticism is certainly a just one. There is, however, a place for the compound microscope in every laboratory, and the instruments should be at the disposal of the pupil in sufficient numbers to obviate loss of time in their use. Simple microscopes should form a part of the equipment of each pupil, and the frequent use of the instrument should be insisted on.

Another piece of apparatus, the value of which as an adjunct in biological instruction is just coming prominently to the fore, is the stereopticon. They are now offered in such a variety of patterns, and the light has been made so cheap and is so easily handled, that the excuse of inability to run an instrument can no longer hold. Lantern slides can readily be made by any amateur photographer, and it is undoubtedly the better plan for the teacher to perfect himself in this line of work than to buy his slides ready-made. His talks in the latter case must be made to fit the slides, whereas his slides should illustrate his talk.

The reference library, from which the pupil is to get such information as cannot be obtained from his own investigations, demands careful attention on the part of the teacher. If there are any suitable books available, they should be so placed as always to be at hand. They should be the best obtainable, thoroly trustworthy and strictly scientific, without being too technical for the average high-school girl or boy. Above all, let the working library be free from the popular scientific literature with which the book market is now flooded. It will not do to teach the science of biology with a poem or delightful novel as a textbook, nor shall we be doing our duty to our students if in our work we adhere to a classification of animals or plants which had its origin in the brain of one of the fathers of the science. If biology is worth teaching at all, it is worth teaching right.

How and what to teach in the biological course in the high school are questions which have been so frequently discussed, and concerning which so many views are held by teachers of long experience, that no effort will be made here to settle them.

The relative values of morphology, systematic biology, physiology, and all the other branches into which the science has come to be divided, cannot be fixed; they are subject to great variation from a multitude of conditions over which the teacher has no control. Much depends upon the training and the ability of the teacher, a great deal upon the age and nature of the pupils, and often no little modification of ideas is necessary to make the plan of work conform to the equipment and the policy of the school. Certain it is, if we are striving to give to our pupils a broad, general idea of the various forms in which life may be manifested and the methods by which these have come to be what they are, no one kind of work will bring success. The student must feel that morphology, physiology, embryology, and all the others are, as it were, but avenues in a labyrinth, all of which must be traversed before we can come to the other end and say with certainty that we know what a given organism is and how it has come to be what it is.

In any course in biology the field excursion must form a feature second in importance only to the work in the laboratory. Upon its success depends very largely our success in sending our pupils into the world with the knowledge that an endless amount of enjoyment and profit lies waiting in every part of nature's ground. The teacher who can go into the fields or woods with his classes and make them see the beauties that lie there and bring them back full of enthusiasm will get far more work from his pupils in the laboratory than the one who spends hours in lecturing or forcing his classes to grind thru some uninteresting text-book. The text-book or lectures or laboratory becomes really interesting only after the organisms have been observed living and moving about. Then for the first time the relation of living things to one another begins to be understood.

From the foregoing it can be plainly seen that, in the opinion of the writer, a person who is to be a successful teacher of biology must have had, in addition to the usual education, special training in the chosen subject—must be an active worker and an enthusiast.

Special training in the teacher will result in benefit to the school; not only that money will be saved by the man who knows what he wants and how to use apparatus after he gets it, but the intellectual product of the school will be far better. Happily the day is almost past when the idea was held that any man who collected specimens was good enough to teach biology. Modern methods and modern men are needed in biology, if they are needed anywhere.

To be an active and enthusiastic worker in some branch of biology is the only means of keeping in touch with the science, so rapid is the progress now being made by the army of its followers. The teacher of biology whose favorite work lies in some other line, who regards his work only as a means of making a livelihood, and who would get out of it if he could do anything else, will surely fall behind and in the end fail.

Enthusiasm in the pupils can be obtained only by a teacher who is himself an enthusiast and who can see in nature all that he tries to impart to his classes.

Our teachers should not be "cranks" who will insist that in biology is to be found all that goes to make an education. They must be, however, men and women of broad and liberal views, who are teaching biology because they can see it is sure to benefit the pupil; who feel that biology must form an important part of every course of study, the aim of which is to bring the pupil into the line of modern thought and modern progress, and, feeling so, be willing to fight for its recognition and fair treatment.

MEMORANDUM CONCERNING REPORT OF COMMITTEE OF SIXTY

As a report of progress from the combined committee, or Committee of Sixty, the chairman, Professor E. H. Hall, of Harvard University, read certain propositions which had been made by Professor Alexander Smith, of the University of Chicago, and which had been discussed by correspondence and otherwise among the chairmen of the five subcommittees. No formal conclusion had been reached concerning any of these propositions, which are substantially as follows:

1. In the secondary schools the courses in each science should not be less than one year in length, and should be of the same weight as courses (of the same length) in other subjects. In view of the fact that home preparation is not required for laboratory work, double periods of time should be assigned to the latter. Thus, where ordinary courses require four periods a week, in science there should be two periods of recitation or demonstration in the class-room, and four periods in the laboratory.

2. Colleges and universities should recognize the expansion and development which the teaching of sciences in secondary schools is undergoing, by placing them among their entrance requirements, and should combine to arrange uniform requirements in all the sciences.

3. The secondary-school course in each science should be designed in the interest of the school pupil, without reference to whether the pupil will enter college afterward or not. College entrance being only one of the objects, and in many schools a minor object from the point of view of pupils, the college should not, and indeed cannot, demand anything which is not equally suitable for all the pupils in a public high school. It follows, therefore, that the college must fit itself to the high school. Each department in the college should adapt its courses so as to offer a suitable continuation of the preparatory course for the benefit of those students who enter with credit in the subject. This should be irrespective of any beginning course which it may find itself compelled to offer.

4. The most general principles, from the school-teacher's point of view, which should control the high-school course in any science are these:

(*a*) That work in formal chemical analysis, the minute anatomy of plants or animals, or specialized work of any kind, is premature and out of place in a high-school course of one year in length.

(*b*) That the high-school work should confine itself to the elements of the subject, with careful selection of facts—full illustration of principles, and methods of thought and work being given.

As a report of progress from the Subcommittee on Physics, the chairman, Professor Hall, gave an account of correspondence which had been carried on between members of the committee.

No formal conclusions had been reached by this correspondence, and as a small minority only of this committee had come to Washington, it seemed inadvisable to make a formal report for this committee. The chairman was hopeful that further correspondence would bring valuable results.

For the Subcommittee on Chemistry Professor C. S. Palmer, acting for the chairman, Professor Alexander Smith, who was absent, made the following report:

REPORT OF SUBCOMMITTEE ON OUTLINE OF ELEMENTARY CHEMISTRY

BY PROFESSOR ALEXANDER SMITH, UNIVERSITY OF CHICAGO

The following general principles are submitted:

1. Theoretical deductions are not justified, as a rule, by the experiments of students alone. But experiments illustrative of the chief principles should be included among those performed by the pupil, or at least among those shown by the teacher.

2. All chemical changes being concerned with the behavior of definite quantities of material, measurement of these quantities by the use of the balance cannot be omitted without endangering the faith of the student in the exactness of the science.

3. Equivalent and combining weights. The proportions and composition by weight of substances taking part in chemical change, being fundamental facts, must be included in the laboratory work of every course in chemistry, no matter how elementary. They are independent of any theory (such as the atomic theory).

4. Adequate experimental study in the laboratory of Avogadro's law and its consequences (leading to the absolute determination of atomic weights) introduces very close and difficult reasoning, and involves volumetric experiments with gases requiring, in some instances, expensive apparatus (Hofmann experiments) and, in some cases, the expenditure of considerable time on the part of the pupil. It may be questioned whether, with large classes and limited time, such work is possible or profitable in the secondary schools as part of the laboratory work. In cases where the students cannot perform the experiments themselves this topic would best be discussed and illustrated in the class-room only. In *no case* can the demonstrations be omitted.

5. The use of formulæ and equations, representing the proportions and composition by weight of the substances taking part in chemical change, will greatly assist beginners in following chemical change. They can do no possible harm, provided the laboratory work contains exercises specifically intended to illustrate the way in which the facts recorded in the equations are ascertained and the way in which the equations are constructed from these facts. Experiments to this end must be introduced early, before any but the very simplest equations have been used, to forestall the misconception which will be apt to arise that equations are made by putting together the symbols of the elements according to some rule, and that this can be done in advance of experiment. Equations can be made independent of any theory (such as the atomic theory).

6. The course in a secondary school should embody information of a chemical nature about common substances. The proper representation of this aspect of the subject ought not to be sacrificed in order to introduce more theory. Indeed, the latter is not secure without abundant material for illustration. The teacher should aim to discuss only such substances and reactions as are of fundamental importance, and he should carefully avoid side issues.

7. The classification of the elements into natural groups is as valuable for an elementary course as the atomic theory. The study of twelve to fifteen elements would be the minimum basis on which any classification should be presented. This leads, therefore, like 6, to the introduction of more facts than the bare presentation of the atomic theory would

require. (The expression "atomic theory" in 7 includes Avogadro's law and its applications.) It must, however, be emphasized that a certain amount of experimental knowledge and knowledge of fact must precede the atomic theory, and that both must precede the natural grouping of the elements. The one (study of groups) cannot take the place of the other.

REPORT OF THE SUBCOMMITTEE ON BOTANY IN SECONDARY SCHOOLS

BY PROFESSOR JOHN M. COULTER, UNIVERSITY OF CHICAGO

[ABSTRACT]

The methods of botanical instruction in secondary schools are so various that a consensus of opinion is hardly possible. This naturally follows from the fact that the subject may be attacked in a variety of ways, and each method presents arguments that commend it to those who use it.

Still the most widely prevalent method is that which was once universal, viz., examination of or recitation about the gross structures of "flowering plants," culminating in the so-called "analysis," and often accompanied by the preparation of a "herbarium" representing a stipulated number of species. When this phase of botany represented all that was organized for elemetary instruction, it was natural that there should be but one method. In the judgment of many teachers this still remains the best method of introducing the subject, in spite of the fact that the science of botany has been immensely enriched and enlarged. The gross structures of flowering plants and the names of a few species seem to be so superficial and restricted, and even irrelevant, a presentation of botanical science that in certain schools the old method has been abandoned and a new one introduced.

The new method has to do with the use of the compound microscope and the examination of minute structures. It is either morphological or anatomical. Taking the morphological method as representative of the type, the theory is that by the careful examination of a few forms representing all the great groups, from the lowest to the highest, a general conception of the structure of the plant kingdom may be developed. The difficulty of selecting a few types that can fairly represent the plant kingdom soon becomes apparent; and many of the first types selected, and almost riveted into our laboratory schemes by text-books and guides, have proved to be highly specialized forms, representative only of themselves. The time-honored use of spirogyra as representing green algæ and of marchantia as representing liverworts is a case in point. The type plan has been modified by increasing the number of types and decreasing the amount of time given to each; seeking to grasp only important and telling structures, and passing over the minor things once examined merely for the sake of examination. This is certainly the best form of the morphological method, and commends itself at least as a suitable elementary course for colleges. It does not follow, however, that it is as appropriate for secondary schools. It is at this point that the conflict of judgment is most pronounced. To some a view of the plant kingdom seen only thru the compound microscope seems not only inadequate, but misleading. A compound microscope is a very deceptive instrument, which needs a trained power of interpretation if it is to present the real facts of structure. It is a serious question whether its excessive use by students as young as those in secondary schools, and with the limitations of time for laboratory work usual in such schools, is the best use of time and money. Emphasis should be laid upon the word "excessive," for no teacher will question the claim that certain structures must be demonstrated by means of the compound microscope; but this does not mean an instrument for each pupil. As a long-time exponent of this morphological-type-microscope method I cannot be accused of prejudice if I confess that its results have not been satisfactory. It does not effectively relate the student to plants as they occur in nature; it is decidedly narrow; and there is no background of experience to make it effective.

It would seem that in the two methods of botanical instruction described above, which, for convenience, may be referred to as the "old method," and the "new method," we have two widely separated extremes. Reaction against the old method naturally led to the other extreme. It has seemed to some of us that it will be wiser to eliminate the disadvantages of both and to combine their advantages in another method. It is believed that the first view of the plant kingdom should be the most general one, so that all subsequent narrowing of the view will have its appropriate background. It is further believed that ecology presents just such a view, and that it furnishes the appropriate material for botanical instruction in secondary schools. The broadest fact is that plants form the natural covering of the earth's surface. It is discovered that they are not scattered at random, but are organized into definite associations or "societies," dependent upon certain external conditions. When some knowledge of these determining conditions has been developed, every landscape becomes significant, and vegetation *in the mass* begins to mean something. If the student carries away from a short course but one piece of botanical knowledge, it is this large preliminary view, which enables him to look upon the earth's surface with some intelligence. It is not the kind of knowledge that is acquired and then forgotten, for the subject-matter is constantly thrust before his eyes.

It is further discovered that each plant is an organism holding definite life relations with its environment; and that this fact determines its occurrence at any given place. The important life relations are studied easily. For instance, the foliage leaf is essentially a light-related organ. This is the greatest fact connected with it, which explains all that is essential in its structure and position. Instead of the dreary drudgery of names usually associated with the foliage leaf in describing its forms, etc., there is the single problem of its light relation, without a knowledge of which form and structure and position have no significance. This method simply means the substitution of the physiological standpoint for the morphological or anatomical; of the standpoint of function for that of structure. It naturally restricts morphological and anatomical examination to those facts which are needed to explain the simplest life relations.

In suggesting a general outline course, it must be understood that the greatest flexibility as to time and material is possible. The course naturally falls into three sections:

I. THE LIFE RELATIONS

1. *Vegetative organs.*—Under this head such differentiated organs as leaves, stems, and roots are studied as to their essential life relations, only so much of structure being included as may serve to explain them.

2. *Reproductive organs.*—Under these would be included not merely the formation of spores and seeds, but all the phenomena connected with their dispersal and germination.

II. PLANT GROUPS

This is not intended to be a full type study; but simply such an introduction to plants as will enable the student to recognize the main groups in the field. He is to know what is meant by an alga, a fungus, a mushroom, a liverwort, etc. This may be done in a very few lessons, or it may be extended indefinitely. It should be remembered, however, that the work is not being done to teach morphology, but to enable the student to do some field work.

III. PLANT SOCIETIES

With some training in the important life relations, and in the recognition of prominent groups, the student is prepared for some intelligent field work. The local plant societies are investigated; and their nature and the conditions which determine them examined.

Such a course not merely brings real contact with plants as they exist in nature, but it certainly supplies that kind of background which every university botanical instructor wishes for his entering students.

THE LEAF A LIGHT-RELATED ORGAN

BY PROFESSOR B. D. HALSTED, RUTGERS COLLEGE, NEW BRUNSWICK, N. J.

Under life relations it may be an advantage to some that an instance be stated, even tho it be in brief terms. Let us take the leaf, as it is the first of the three organs cited by Dr. Coulter under his group of vegetative organs. Let us keep up this threefold division a few steps farther.

The leaf is divided into three parts—the stalk, stipules, and blade. Furthermore, the blade is made up of the framework, the pulp, and the skin that envelops all and holds the parts together. Professor Coulter has stated that the leaf is a light-related organ, and it will be to the point to pursue this relationship a little farther.

It is the pulp that interests us in considering the leaf as related to the light, and this is the soft portion lying between the upper and lower skin and supported by the framework. It consists of minute cells somewhat loosely placed. It is now that the microscope lends valuable assistance, for by it it is seen that the cells consist of three parts, the wall or sac, the liquid, and the green granular contents. It is these minute masses of protoplasm colored green by chlorophyll that interest us in a study of the light relation, for it is in these that the energy of motion is transferred into energy of position; kinetic into potential energy.

Within these chlorophyll granules the energy of the vibrating rays of the sun splits up the molecules of water, coming from the soil thru the roots and stems, and those of the carbon dioxide from the atmosphere, driving off a portion of the oxygen. Thus, if we should have six groups of the carbon dioxide molecules ($6\ CO_2$) and five of water ($5\ H_2O$), there might be a separation of twelve atoms of oxygen, and the union of the remaining portion would give a molecule of starch ($C_6H_{10}O_5$). This is food-making reduced to its simplest terms, and the chlorophyll granules that float in the semi-liquid plasma are the centers of synthesis of organic compounds.

Each starch granule, whether of wheat, potato, sago, or rice, represents a potential energy that may remain unnoticed until the occasion for oxygen again to unite with the elements in the compound, when it ceases to exist as starch; and with the liberation of sensible energy, carbon dioxide and water result. In other words, the sun's force raises the inorganic compounds to a higher plane by deoxidation and union, and from that plane they may fall back, yielding in the descent an energy that physicians tell us is equal to that by which it was raised.

In considering the leaves in their relationship to the sun, and the whole realm of life upon the earth, it is evident we are face to face with the most potent of vital activities and are getting at the heart of the forces that move the world. We might well approach with much solemnity the subject that lies before us, for the green leaf, as it stands upon its supporting twig, is a minute laboratory in which a noiseless chemist is constructing compounds that possess a potency peculiarly their own.

With these facts in mind it must needs be a very heedless child who will not be impressed with the worth of the wealth of greenness that is met with in the living vegetable fabric that is woven with sunlight to clothe the otherwise barren earth.

From this central thought concerning light relations of plant foliage there are a thousand starting-points for study, and time permits of but the briefest mention of a few. Many plants have no green color, but doubtless prosper. These are the parasites, plants that have long ago formed the habit of gaining their nourishment at second-hand and from those who do their own work of synthesis. The golden-threaded dodder, the sickly-hued mistletoe, are of this class. They form no exception, in the true sense, for they steal instead of labor for their living. The mushroom, toadstools, molds, and mildews are other low forms of plants that live upon organic matter similar to the more exalted flower-bearing parasites.

There are many plants that, while making their own food, are seemingly without green. This is only a *seeming*, for beneath all the bright color there is an abundance of the chlorophyll, which may be as readily extracted, for example, from the showy coleus leaf as from the green grass.

There is a long list of questions that naturally arise in the thoughtful mind as to the behavior of plants in relation to the sunshine. To illustrate this we will go out into the woods and use our imagination in a piece of field work. It is possible that a little study like the following may be made.

Let me draw the outline of the problem that is to be investigated. Imagine, if you will, that we are standing upon a slope of land facing the north, that the sun may not blind our eyes. To the right is a wood lot with its oak, hickory, chestnut, birch, and other trees, standing neighborly with arms interlocked, not too closely for comfort; and thru the branches the broken shafts of light reach the shrubby and herbaceous vegetation beneath. There are the alders and huckleberries; and their close of kin, the Virginia creeper, runs upon the ground and over the smaller trees in the vicinity of a sleepy rivulet bordered by skunk cabbage and jack-in-the-pulpit. Where it is not quite so marshy the ground view of the woods is delightfully obscured by a luxuriant growth of the cinnamon fern, for it is midsummer. To the left is a similar piece of wood lot, not a primæval forest in either instance, and here the wild grape clings to the young maple, and the poison sumach may be lurking in the lowland. In front of you, however, lies a strip twenty rods wide where the woodman's ax has done its destructive work, and the clumps of small growth which you see are the sprouts from the maple and other stumps. This is the second season from the time of clearing.

Have you the picture before you — a rectangle of vegetation stretching down to the rivulet, that is lost under the direct rays of the summer sun, and then on up the slope beyond; all framed in by right lines of forest trees and grateful shadows? If you have located the clearing from my brief outline, you are ready to enter in and possess it botanically.

If such a piece of land, even tho it be but a single acre, is close at hand, you have a treatise on vegetable ecology and physiology that contains no end of treasures. Not that it includes any long list of species, but that it does possess the varying conditions which, taken in connection with the border land, are more interesting than books; for it is the living volume, the vitalized cyclopædia of facts, and the suggestions of principles that make plant analysis seem tame and useless, save as it may help to catch the convenient handle to hold the subject that is undergoing some delightful transformation.

Let that clearing be your field of study from time to time. When the days are long and the heat is intense, make notes, and with specimens there gathered retreat into the shade of the wood lot upon either side. Compare the parts of the sun-kissed, and it may be sunburned, herbs with those of its shaded neighbor of the same species. Both were once alike, but the ax of the woodsman has let in the full sun upon the one, with drying effect upon the soil surroundings. One bears, or attempts to bear, the burden and heat of the day, while the other is nursed in broken sunshine and a moister soil.

The osmunda in the sun has its fronds strict and upright, the pinnæ uplifted and twisted to lessen the direct exposure. In the shade its habit is that of some other species, with the fronds gracefully curved outward and the delicate pinnæ so placed as to catch every broken shaft of the sunlight that penetrates the tree tops. The ferns in the open are bleached, while those in the shade are deep green; the former are tough and the latter delicate.

Every plant in the clearing that has survived the ordeal of the exposure is a study of adaptation, the reason for the change in some instances not being upon the surface; but this only adds to the interest that is centered in the clearing and its surroundings.

This is the new botany. It is not yet in the books, and in one sense never can be. It inheres in the plants themselves, and any attempt to lodge it elsewhere must needs be futile. I trust each teacher of the science of botany may find a field for study in the sense of the clearing briefly outlined.

It may be more convenient for some student and teacher — and one needs to be both to be the latter — to have a garden patch where plants may be asked various questions. If it is in the line above indicated, a shading total or partial may be easily arranged. For example, a half shade may be provided by placing frames of lath upon stakes. The frames may be made for a few cents, by nailing ordinary carpenter's laths to cross laths at the ends, with a single lath interwoven thru the middle. If half shading is desired, let the vacant spaces between the laths be equal to the width of the laths. Under such a shading ordinary plants like bush beans, lettuce, etc., may be grown, and the variations in time of germination, size of plant, of leaf and its position, time of blooming, size of fruit, longevity, etc., can all be studied with no small amount of interest and profit at a minimum of expense.

Should you like to make a record of the difference in thickness, for example, between the exposed and shaded leaves, it can be done by actual measurement, but there is another way not mentioned in the books. Place two bean leaflets, one from the open and one from the shade, upon a slip of clean glass in a photographer's printing frame, and over the two specimens place a sheet of sensitized paper and expose them to the sun. When the work is done you will have a print of each leaflet, but the thinner one from the shade will have recorded the fact in the darker print. In short, the sun will have made its own registration of its own penetrability.

Nothing that has been named in the way of apparatus is expensive, in the ordinary sense. Anyone who can afford to have a bicycle and keep it in repair is able to follow up the suggestions. That a child of nine years can be interested in this study of plants is certain, for it has been tested by the writer to his entire satisfaction.

PRELIMINARY REPORT OF THE SUBCOMMITTEE ON PHYSICAL GEOGRAPHY

BY PROFESSOR ALBETT PERRY BRIGHAM, COLGATE UNIVERSITY

The committee appointed to consider the course in physical geography in secondary schools would respectfully report as follows: The decision of the department at the Milwaukee meeting, to double the membership of the several natural-science committees, occasioned serious delay in the work. Diligent efforts were made to secure the additional appointments for geography. It was found in March last that three vacancies still remained, but in order to prepare a report in time for the meeting at Washington, with the approval of Professor C. S. Palmer, the general secretary of the committee, work was undertaken, the committee being constituted as follows:

NEW ENGLAND ASSOCIATION

William North Rice, professor of geology, Wesleyan University.
W. H. Snyder, master in science, Worcester Academy.

MIDDLE STATES ASSOCIATION

Albert Perry Brigham, professor of geology, Colgate University.
J. M. Jameson, professor in Pratt Institute.

NORTH CENTRAL ASSOCIATION

G. L. Collie, professor of geology, Beloit College.

SOUTHERN ASSOCIATION

Collier Cobb, professor of geology, University of North Carolina.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Ralph S. Tarr, professor of dynamical geology and physical geography, Cornell University.

DEPARTMENT OF NATURAL SCIENCE, NATIONAL EDUCATIONAL ASSOCIATION

W. M. Davis, professor of physical geography, Harvard University.
R. H. Cornish, assistant in physics, Girls' High School, New York.

The chairman prepared a preliminary list of questions for criticism by the several members of the committee. The following circular of inquiry was then issued as a basis of work for members of the committee and others:

1. Should a high school offer the following subjects under the general head of geography: mathematical geography, meteorology, oceanography, physiography of the land, distribution of organisms, economic geography, geology? If geology is included, what parts of the subject should be taught? What topics should economic geography embrace?
2. In what year or years of the high-school course should physical geography have place? What studies should precede or follow?
3. What preparation in geography is to be expected from the elementary schools?
4. Outline of work for one- and two-year courses, including order and time allotment for subjects named in 1. and number of periods per week.
5. Place of geography in college-entrance requirements. Should geography be elective or required in so-called English courses? In classical courses? To what extent may geography be presented as a substitute for other subjects, particularly for other sciences?
6. Text-books.
7. Laboratory work; how related to lectures and recitations; outline of laboratory courses; use of notebooks; amount and character of field work to be done; modifications in field work, or substitutions for it, in city schools.
8. Standard equipment of maps, models, photographs, lantern slides, specimens, and apparatus for class-room and laboratory.
9. List of books in geography recommended for school or teacher's library.
10. Any other phase of the subject deemed important.

The several individual discussions thus prepared were embodied in this report, which was amended and approved at a meeting of the committee held in Springfield, Mass., July 1–2, 1898. Only those who were able to be present at this meeting have signed the report. The gentlemen who were not present cannot be held responsible for the views here expressed, but they have all made valuable contributions to the paper, and are believed to be in accord with most of its positions. In the case of the signers of this report, it is not to be understood that every one approves of every proposition announced as the opinion of the majority of the committee, tho all do find themselves in cordial harmony with the views of the report as a whole.

1. The committee finds itself in agreement as to the scope of physical geography and as to the topics which should constitute parts of a high-school course in this subject. The meaning and general scope of physical geography have never been better expressed than in the words, "the physical environment of man," used by the conference on geography in its report to the Committee of Ten. On the whole, the term "physical geography" is to be preferred to physiography, as having in common usage a more precise definition. Physiography in the English sense of a general introduction to all sciences is too broad; and in the sense in which it is now employed by some American students it is not broad enough. The ideal high-school course in physical geography will be neither too general and fragmentary, nor too special and difficult. The subject should be carefully held to the leading idea of the physical environment of man, and it should be the aim to exclude a number of subjects frequently treated under physical geography, but more appropriately included under other heads; for example, purely astronomical matter, certain principles of physics, the classification of animals and plants, and tables of the geological periods. Important and interesting as these subjects are in their proper connection, it is believed that a better mental discipline will be obtained from physical geography when all its parts are closely joined to its leading theme. It may thus provide an intellectual training comparable in value to that secured from physics, mathematics, or language, in which continuity of theme is so well maintained.

It is agreed that the earth as a globe, the atmosphere, the ocean, and the lands should be the principal themes of the course. Here one may, if preferred, use the more formal terms, mathematical geography, meteorology, oceanography, and geomorphology. A serious objection to these terms is that they do not sufficiently take human relations into account. If, however, they are employed, it is to be understood that the character of high-school work, as well as the limited time at disposal, forbid the giving of extended courses in these subjects. They must all, and especially the three former, be given in an elementary way, and all must be taught with the motive, and from the special point of view, of physical geography as defined above.

The distribution of organisms should not be taught with reference to zoölogical and botanical classification, but in exposition of the organic environment of man, and as itself controlled by physiographic and other influences. Pupils should be taught the tendency of species to diffuse themselves and the limitation of the tendency of climatic, oceanic, and topographic barriers. It will, for example, be easy to teach the influence of temperature in the establishment of zones of animal and vegetable life. The difference in the effects of deep and shallow seas as barriers to distribution should be illustrated by reference to Wallace's line, and to the faunas and floras of continental and oceanic islands. The depth and texture of soils, and the quantity and distribution of ground water, should be related to their control over the distribution of plants and population. The whole subject may be treated by incidental references in the chapters on the atmosphere, the ocean, and the lands, or may form the theme of a supplementary chapter, or the two methods may be combined.

Thruout the course in physical geography every opportunity should be taken to illustrate the relation of economic products to physiographic control, on the one hand, and to the distribution and condition of mankind, on the other. If time allows, a summary of the subject might be added as a closing chapter.

In the next section of this report reference will be made to more advanced elective courses of a geographic nature which may have place in the high-school curriculum.

2. The committee recommends that the course in physical geography be generally placed in the first or second year. If the elements of physical geography have been used as a basis for work in geography in the elementary schools, then physical geography in the high schools might perhaps be a relatively advanced course in the fourth year, using the materials afforded by the study of physics, chemistry, and biology in the previous years. It is, however, the opinion of the majority of the committee that under any conditions the study of physical geography should come early in the high-school curriculum. Certainly this is the case as matters now stand. It would be unwise to allow pupils to reach the age of eighteen years, or thereabout, without attaining the broad way of looking at the earth that physical geography, of all subjects, gives.

Additional reasons for introducing the subject at an early stage are found in the fact that only a small part of the pupils who enter the high school complete the curriculum, and in the further consideration that the subject can, without deranging the general order of studies, in some cases be taken by those who are preparing for classical courses in college. The committee deems it entirely practicable to teach good courses in elementary physical geography without previous courses in other sciences. The qualified teacher will readily supply any needed chemical or physical principles. In some cases rudimentary instruction in physics and chemistry has been given in grammar-school courses.

Advanced elective subjects of a geographic nature may be offered late in the curriculum. Among these is geology. It is agreed that the larger share of time should be given to dynamical and structural phases of the subject. Only the simplest facts about minerals and rocks can be given, and such difficult dynamical subjects as metamorphism and vulcanism can be treated only in a general way. It will be possible for a competent teacher to give effectively the elements of historical geology, especially if good museums or localities for fossils be at hand. Detailed instruction in historical geology is too difficult for high-school pupils, and should not be attempted.

The course in geology should, if practicable, follow those in physics and chemistry, probably in the last year of the curriculum. In dynamical and structural geology the subjects treated will necessarily be to some extent the same as those in the earlier work in physiography. But the treatment of these topics in the course in geology will be in less degree simply descriptive. For instance, in the earlier course some general ideas of the work of running water and the development of topographic forms can be given. In the later course the work of running water should be explained in relation to the laws of energy, the stream being considered as a falling body. In the course in physiography the general action of the atmosphere in the decay of rocks can be presented, but in the later course in geology the nature of the chemical changes involved in weathering should be illustrated. In general, dynamical geology should be regarded as the chemistry and physics of the globe, and the conduct of this course must, therefore, presuppose a knowledge of chemistry and physics on the part of the student. If the pupil has studied zoölogy or botany, or both, during the earlier years of the curriculum, it will be possible to make an outline of historical geology more intelligible than it could otherwise be.

The committee approves of the suggestion that an advanced elective course in meteorology may be introduced, if the number and qualifications of the teachers render it practicable. Such a course would probably come in the last year, accompanying or following a course of physics. Such a course would sustain to the meteorological chapters in physical geography a relation similar to that which the course in geology bears to that section of physical geography which concerns geological processes.

If a course in astronomy is offered in the later high-school years, it would follow as a natural expansion of the chapter on the earth as a globe. If a later course in physical geography should be introduced, it might be either an expansion of the first course, with more advanced treatment, or a course in the physical features of some land area, preferably the United States.

Altho it has seemed worth while to give brief indication of the nature of the four advanced courses above outlined, it is not desired to imply that high schools should at present offer all, or, indeed, any of them. The chief interest of the committee is in the establishment of a well-considered elementary course.

3. It may be reasonably expected that in the teaching of geography in the elementary schools a good beginning will have been made in acquainting the pupil with the conceptions of physical geography. Geographical teaching has greatly improved in the last two decades, and much is to be expected in the near future from the current agitation in this field. Frye's *Complete Geography*, and the *Natural Advanced Geography* by Redway and Hinman, illustrate the kind of knowledge which may be expected to be acquired in the grammar schools. Teaching that deals with mere matters of location may, with advantage, be replaced by the introduction of the causal notion.

4. The committee desires to emphasize at the outset that no one curriculum can be the best for all high schools. No outline of work can be made to fit all conditions. It is of doubtful utility to give to teachers at large anything more than a very general outline, which may offer suggestion and prove a help and incentive to better things. Not less than four periods per week for one year should be assigned to the proposed elementary course in physical geography. Five periods would be better. Periods of less than forty-five minutes each would be inadequate, and in any case two periods per week should be scheduled together, to be used, if desired, for field or laboratory exercises.

Of the leading subjects, the earth as a globe, the ocean, the air, and the land, the first should occupy the least time, and the others should have an increasingly larger allowance, in the order given. Adequate treatment of the features of the land will require as much time as the other three subjects combined, and it may be more. If the distribution of organisms and economic geography are treated as separate subtopics, the time allotted to them must necessarily be short. As regards the whole question of proportion, it must again be said that much depends on the teacher and the environment. A teacher in a school situated near the ocean might give much attention to the features of the shore line, while one in the interior might give a larger share of attention to plains or mountains.

It is not deemed necessary to present in this report detailed outlines of teaching material. Recourse should be had to text-books, school journals, and especially to the report of the conference on geography to the Committee of Ten.

Nor is it thought best to give estimates of time for the advanced elective courses which have been suggested, believing that time allotment must vary with the views of teachers and the conditions of schools. If the association desires the committee to go farther into the question of outlines, it will be glad to receive instructions on that point.

5. Recalling the fact that the Committee of Ten places physical geography as a requirement in the first year of all high-school courses, your committee desires to express its agreement with this indication of the importance of the subject, in the hope that it may be made accessible to all. The committee would, however, hesitate to propose the prescription of the study for all, but does strongly urge that physical geography be required in all English high-school courses. It also believes that it should be elective in classical courses, either on the same footing with all the other sciences, or in a position secondary to physics, as indicated below.

The attention of educators has been of late repeatedly called to the truth that a four-years' course consisting almost exclusively of classics and mathematics, with scant recognition of English literature, practically no modern history, and no physical or natural science, is a course so disproportionate and unsymmetrical as to be a monstrosity. The relation of the different educational institutions to each other ought to be such that a course preparatory to college will also be a course well adapted to fit the student for the later work of life and for social and civil duties, in case he should fail to take a college course. It cannot be claimed that the present classical course in high schools, constructed with reference to the classical course in colleges, makes any approximation to this result. The student who has completed a high-school course in preparation for the classical course in college has gained, not a tolerably complete and symmetrical education as far as it goes, but a wretched torso of an education. Nor is the exclusion of science injurious only to those whose studies are interrupted at the end of the high school course. For those who enter college the ignoring of the study of nature in preceding years tends to unfit for success in such studies. Their powers of observation and imagination of physical phenomena are well-nigh atrophied by disuse, and they have lost their native curiosity about the world in which they live. It would tend to correct this evil if a certain amount of science were required for admission to the classical course. Physical geography would be one of the most suitable subjects to be thus required, but in the present unsettled and transitional condition of our educational system it would probably be better for the colleges to allow an option among several scientific subjects.

Taking the point of view of the college, the sentiment of the committee is that physical geography should not be required for entrance to any of its courses, but that the college should accept it as part of the preparation for any course, when pursued for not less than one year, provided the teaching has attained a proper standard of excellence. In its relation to physics, chemistry, zoölogy, botany, and physiology, several members of the committee believe that geography should stand on perfectly equal footing, as an alternative requirement, but some would assign to physics distinctly the first place. Those who take this view, however, would insist that geography be accepted as an alternative for any other scientific subject. The college should not fail to set serious tests in geography, where given at all.

6. The number of text-books which represent the best current standards of high-school geography is not large. Several now before the public are fairly well adapted for class use. Their titles will be found in the annotated list to which reference is made later in this report. In the use of these books, as well as in the preparation of new ones, it is hoped that the definition of the subject, as already given, will be carefully regarded. The earth in relation to man should receive sustained emphasis, and irrelevant scientific matter should be reduced to a minimum. A number of good text-books are available in the subjects suggested for advanced elective courses.

7. Field and laboratory work should receive emphasis in every high-school course in geography. So far as practicable, the lectures, discussions, and recitations should be related to such work. Notebooks should be carefully kept, but their importance should not be emphasized in an artificial way. It is possible for a pupil to make a handsome notebook, while entering little into the spirit of the subject.

Field work during the open season should take the place of at least half of the laboratory work, if conditions allow. It must not be forgotten that the field is, from one point of view, an out-of-door laboratory. The teacher must plan the work according to circumstances, but it should certainly include practice in the making of sketch maps, study of the development of land forms, and observation of the distribution of plants on a small and varied area. In most cities, except the largest, field study can be accomplished without serious difficulty, by short excursions into the country. Such work is strongly recommended. The interest attaching to such trips will frequently enable the teacher to place them in afternoons and holidays. Field work has been undertaken with favorable results in Buffalo, Chicago, and elsewhere. The report of the Chicago committee for preparing a syllabus in physical geography includes a valuable list of such possible trips, for the use of the teachers of the city. Eleven excursions are scheduled, giving route, cost of round trip, and naming the phenomena to be seen and studied. The latter include stone quarries, streams, bowlders, and glacial topography, sand dunes, lake shores, and a large museum. Preparation of similar guides for other cities would greatly advance this kind of geographic study. Chicago is not an exception. An equally important group of facts is assembled in the vicinity of nearly all cities.

Laboratory work in geography is comparatively new to the schools at large, and hence suitable manuals or outlines are few; but sufficient bodies of suggestion are at hand for good beginnings. One member of the committee has contributed the following, which is here included, not as a specific guide, but by way of informal suggestion. Figures in parentheses indicate the number of hours for each exercise:

Cause of day and night and extent of sunlight over surface,	(1)
Determination of latitude, north and south line, and high noon,	(1)
Determination of difference of longitude by sending watch,	(1)
Finding variation of local and standard time,	(1)
Making maps on different projections,	(4)
Study of ocean-current maps,	(1)
Study of tide charts,	(1)
Study of map of the world showing heights of land and depths of sea,	(2)
Difference in temperature between the top and bottom of a hill,	(1)
Finding height of hill or building by barometer,	(1)
Determination of dew point,	(1)
Making isotherm and isobar maps from furnished data,	(4)
Study and reproduction of weather map,	(1)
Predictions from weather maps (written with reasons),	(2)
Observations of rainfall, temperature, velocity of the winds, etc.,	—
Determination of the amount of snowfall and the amount of water produced by an inch of snow,	(1)
Observations of ground temperatures, depth of frost, etc.,	—
Making contour and hachure maps from small models,	(2)
Drawing cross sections from contour maps,	(4)
Written descriptions of models,	(4)
Picture reading (written description),	(4)
Map reading (written description),	(4)
Reproduction of contour map in hachures,	(1)
Making map of small area in neighborhood,	(1)
Trip or journey planning with study of country to be seen,	(4)
Determination of the amount of sediment carried by a stream,	(1)
Study of rocks and minerals,	(10)
Study of erosion by sprinkling pot,	(2)
In fall, four excursions, one a week,	(8)
Four excursions in spring,	(8)

For another laboratory outline which has been tested by actual experience, see "Laboratory Work in Elementary Physical Geography," by R. H. Cornish, *Journal of School Geography*, June and September, 1897.

8. There cannot be a uniform or standard equipment of apparatus for geographical teaching. It is sought here only to give such suggestions as may enable teachers and schools to acquire, without serious mistake or delay, materials for effective work. Maps and photographs will naturally predominate, and slides and projecting apparatus should be added if possible, with the more common meteorological instruments. Care should be taken to secure illustrations well related to the systematic progress of the work. For example, under land forms the illustrations introduced should be chiefly directed to explaining their causes and consequences, rather than to the production of striking pictorial effects. A

set of about one hundred classified lantern slides selected by W. M. Davis, chiefly from the Gardner collection of geological and geographical photographs of Harvard University, can be purchased from E. E. Howell, Washington, D. C. Some of the more important materials, such as the topographic maps of the United States Geological Survey, cost but little, and much material may be had free of cost from official surveys, or as gifts from individuals interested in the school. Some account of these and other official maps may be found in *Governmental Maps for Use in Schools*, published by Henry Holt & Co., New York.[1] Models serve a useful purpose if their vertical scale is not too much exaggerated. Among those that may be mentioned are a number made by E. E. Howell, Washington, D. C., and the Harvard geographical models published by Ginn & Co., of Boston.

Suggestions concerning the use of these topographical maps in schools have recently been published by the departments of public instruction of Massachusetts, Rhode Island, Connecticut, and New York. Similar publications would be useful in other states. An important publication of the United States Geological Survey has lately been begun in the topographic atlas of the United States, of which the first folio, entitled *Physiographic Types*, by Henry Gannett (price, 25 cents), will be found of much material service. Other folios of this series are promised for the future.

It is believed that school boards will in the end furnish appropriations for geography as freely as for physics or chemistry, if the needs of geography are duly appreciated by superintendents, principals, and science teachers. Abundant allowance of time should be given to secondary teachers of geography, to perfect their equipment and to work out the new problems with which they have to deal.

By way of further suggestion, the teacher is referred to an article on the "Equipment of a Geological Laboratory," by W. M. Davis, in the *Journal of School Geography* for May, 1898. The following list also indicates an equipment found practically useful by one member of the committee:

A good globe; small globes (25 cents), one for each two pupils; plumb bobs; vertical standards for the determination of latitude; Kiepert's "Physikalische Wandkarten" (Europe, Asia, North America, South America); "Weltkart zur Übersicht der Meerestiefen und Höhenschichten;" small compasses; bright thin metal dishes for the determination of dew point; blank weather maps; co-ordinate paper; thermometer; barometer; rain gauge; tide charts; ocean-current maps (copies from Challenger Expedition); small wooden balls; small outline maps; sprinkling pots and boxes; a few typical charts; geological maps; United States contour maps, sufficient duplicates of

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[1] Since the publication of this book the free distribution of the pilot charts of the North Atlantic, issued by the United States Hydrographic Office, and of the topographical maps published by the United States Geological Survey, has been suspended. The charts and maps are now sold at a very low price by the respective bureaus of publication. The method of purchasing the maps issued by the Geological Survey is explained in the *Journal of School Geography* for September, 1897.

some sheets to give one to each pupil; Davis and Curtis models; fragments of models for contour drawing; maps of different projections; a few English hachure maps; photographs and pictures; stereopticon and views; several atlases; collection of rock and mineral specimens, enough for each pupil if possible.

For illustration of the structures and processes concerned in the development of land forms there should be specimens of the common rock-forming minerals, and of such rocks and structures as are important in determining topographic forms, or have economic value. Thus there should be sandstones, conglomerates, shales and limestones, lavas, specimens showing faults on a small scale, slickensides, crumpled laminations, ripple marks, raindrop impressions and sun cracks, glacial bowlders and glaciated surfaces, stalactites and stalagmites. If an advanced course in geology is given, the amount of such material as has been indicated above should be considerably increased, and some fossils should be added. In all cases care should be taken to avoid such jumbles of miscellaneous minerals and fossils as often make up collections so-called.

9. An annotated list of text and reference books has been prepared by Miss Mary I. Platt, recently of Radcliffe College, now teacher of geography, High School, Holyoke, Mass. The list, including fifty titles, has been examined and criticised by W. M. Davis and R. E. Dodge, and is published in the *Journal of School Geography* for May, 1898. This list is by no means intended to be exhaustive of useful books, but outlines a useful beginning of a school library which might to advantage be greatly increased. It is further suggested that the *Journal of School Geography* is the most important help with which teachers of the subject in the grades and high schools can provide themselves.

PREPARATION OF THE TEACHER

10. It is not to be expected that notable success, in this or any other subject, will be attained if attention is so far turned to the outline of the course or the equipment of the schoolroom that the preparation of the teacher is forgotten. The committee, therefore, wishes to emphasize three points that are of prime importance in this connection. The training of the teacher should have reached a distinctly higher grade in physical geography than that of the course to be given. It should include laboratory courses in physics, chemistry, botany, zoölogy, and geology, and it should have developed ability to take advantage of the local phenomena in the neighborhood of the school in the conduct of field work. These considerations should weigh in the selection of new teachers. Teachers already employed and of good experience in their work should be urged to supplement their preparation, if deficient in any of the lines above indicated, by attending serious courses in teachers' classes and summer schools, as far as practicable with due regard to rest and health.

A primary object of this report has been to attempt a rational definition of physical geography and to offer to teachers and school authorities a line of suggestion in organizing geographic instruction, especially to secure a sound elementary course in the early years of the high school. Minute and specific directions are undesirable, because a great variety of conditions must be met and the new must be built upon the old. A further object here sought is to set forth practicable views of the co-ordination of geography with the other sciences in the high-school curriculum, and of geography as a factor in satisfying college-admission requirements. The results, of course, are tentative. It is not thought that this committee and the other committees with which it is associated can formulate a rigid or final plan for all schools, but an approximation toward unity can be made, with advance upon the chaotic conditions of secondary-science instruction in the past.

The committee would be glad to be continued for another year, in order that, profiting by the discussions of its conference already held, and by such criticisms as the publication of the present report may evoke, it may embody the results of further consideration in a subsequent report.

ALBERT PERRY BRIGHAM, *Chairman.*
COLLIER COBB.
W. M. DAVIS.
WILLIAM NORTH RICE.
W. H. SNYDER.

DEPARTMENT OF SCHOOL ADMINISTRATION

SECRETARY'S MINUTES

FIRST SESSION.—FRIDAY, JULY 8, 1898

The meeting was called to order at 3 P. M., at the Columbian University, by President John E. Brandegee, member of board of education, Utica, N. Y.

Mr. Jesse H. Wilson, of Washington, extended a welcome to the department, which was responded to by the president.

Mr. Harvey H. Hubbert, member of board of education, Philadelphia, then read a paper on "What Kind of Centralization, if Any, will Strengthen Our Local School System?"

The discussion was opened by Dr. William Clarence Webster, Columbia College, New York city, and continued by William George Bruce, editor *American School Board Journal*, Milwaukee, Wis.; Dr. C. M. Woodward, St. Louis, Mo.; John T. Prince, of Massachusetts; Charles Bulkely Hubbell, president of board of education, New York city.

Mr. Job Barnard, member of board of education, Washington, D. C., then read a paper on "Manual Training—Its Purpose and Value."

The discussion was opened by C. M. Woodward, of St. Louis, Mo., and continued by P. N. Sigler, of Dayton, O.

Mr. B. W. Wright, of Ishpeming, Mich., then read a paper on "The Tenure of Office of the Teachers."

The chairman appointed the following committee on nominations:

B. W. Wright, Ishpeming, Mich.; Harlan P. French, Albany, N. Y.; P. N. Sigler, Dayton, O.

Adjourned.

SECOND SESSION.—SATURDAY, JULY 9

The second session opened with President Brandegee in the chair.

The Committee on Nominations reported the following-named officers for the ensuing year:

President—E. F. Bradt, Ishpeming, Mich.
First Vice-President—Charles Bulkely Hubbell, New York, N. Y.
Second Vice-President—John F. Hughes, Utica, N. Y.
Third Vice-President—William S. Black, Aurora, Ill.
Secretary—William George Bruce, Milwaukee, Wis.

Executive Committee

P. N. Sigler, *Chairman*, Dayton, O.
Harvey H. Hubbert, Philadelphia, Pa.
Edward Welden, Bethlehem, Pa.
C. M. Woodward, St. Louis, Mo.
Job Barnard, Washington, D. C.
A. Lawrence Lowell, Boston, Mass.

The report was adopted, and the nominees were declared elected.

Mr. A. Lawrence Lowell, member of board of education, Boston, Mass., then read a paper on "The Professional and Non-Professional Bodies in Our School System, and the Proper Function of Each."

A discussion followed, by P. N. Sigler, of Dayton, O.; C. M. Woodward, of St. Louis, Mo.; Edwin P. Seaver, of Boston, Mass.; S. M. Kelten, of Anderson, Ind.; Job Barnard, Washington, D. C.; John E. Brandegee, Utica, N. Y., and Harlan P. French, Albany, N. Y.

John F. Hughes recommended that the department take up the subject of heating and ventilation next year.

·A paper by Edward Welden, of Bethlehem, Pa., on "The Selection, Appointment, and Removal of Teachers and the Grading of Salaries," was not read, owing to the writer's absence.

A general discussion followed, in which the subject of heating and ventilation received attention, Messrs. E. A. Gastman, of Illinois; Edwin P. Seaver, of Massachusetts, and P. N. Sigler, of Ohio, taking part.

After a few remarks by the newly elected president, E. F. Bradt, of Ishpeming, Mich., the department adjourned *sine die*.

WILLIAM GEORGE BRUCE,
Secretary.

PAPERS AND DISCUSSIONS

WHAT KIND OF CENTRALIZATION, IF ANY, WILL STRENGTHEN OUR LOCAL SCHOOL SYSTEM?

BY HARVEY H. HUBBERT, MEMBER OF BOARD OF EDUCATION, PHILADELPHIA, PA.

This is a time when prodigious efforts are being exerted to concentrate interests managed by many under a system whereby they can be controlled by one corporate authority. Commercial and industrial enterprises are being consolidated on every hand, in order that the commercial interests involved may be the more economically and effectually administered, and this is also true in the social life of our days. Religious and moral movements are being combined in vast organizations, under one executive head, whose power and influence and numerical strength extend into all continents, comprise all races, and fellowship with all tongues. It should, therefore, occasion no surprise to find this same spirit and impulse pervading educational circles. A strong sentiment is widely expressed in favor of centralization of executive authority in school government, and it is the settled conviction in the minds of the most thoughtful and earnest friends of our public-school system that some concentration in this respect should be secured among all the states, to overcome the evils which spring from the district system of control and the multiplied methods of administration which prevail in so many states. We admit that the problem is not easy of solution, and the efforts to secure such a result have not thus far been entirely satisfactory. Much of the school legislation of recent years has been enacted in order to bring about a form of government in this direction, but the only result obtained in most instances, thus far, has been to institute conflicting elements by retaining the powers, in a limited form, of the local boards or trustees, and at the same time conferring controlling powers upon a newly created board or authority operating within the same jurisdiction.

This condition prevails in a number of states, and has in every case seriously hampered all efforts to secure the most efficient and practical local supervision. Centralization of authority which would be acceptable must come from state legislation.

National control upon the plan which prevails in continental Europe, which confers all authority upon one man, the minister of public education, as in France and Germany, is so utterly opposed to the American idea of self-government and home rule as not to be entertained even as a proposition in this discussion. It is our conviction that any plan of administration that would meet with general adoption must be one which recognizes the right of the people to govern thru delegated representative school officials, and therefore local control and supervision should be preserved, but in such a way as not to conflict with authority vested in some central corporate body. Dual or rival school authorities should be abolished wherever they exist, and no further legislation should be permitted that would tend to recreate a system which has worked so much mischief wherever it has been in operation.

The idea has prevailed in the United States, from the very origin of our school system, that the states, individually, should make provision for the education of the young, and it would seem to be consistent with this principle that the states should have control over the schools within their borders. A state board of education, similar to that which has been in existence in Massachusetts for so many years, is the best method yet tried in securing state supervision and organization. Such a board could very properly be authorized to have general executive authority, to see that the school laws are properly executed, that the state school funds are equitably distributed, and to provide for a uniform basis upon which the school tax shall be assessed; also to establish uniform courses of study for the schools of all grades thruout the commonwealth, to fix the qualifications of teachers, and to provide for their proper selection and examination.

Local authority could be exercised by school directors or committees appointed or elected for every town in the state, and boards of education for the larger cities, such as now exist in many of the states. The functions of these local school authorities should consist of executive and administrative authority, and should be limited in their exercise to their respective town or city jurisdiction. They should appoint the teachers, locate the schoolhouses, and expend all moneys and appropriations for the maintenance and support of the schools, and should have such general supervision as would insure absolute control over all matters pertaining to the management and direction of the public-school system.

The school boards or committees should be composed entirely of representative citizens, and no person should hold *ex-officio* relations to the school boards by virtue of any connection with other departments of municipal or county governments, for it is usually these elements in school boards that are responsible for the mischievous influences of politics which so often neutralize the best efforts of the school authorities.

DISCUSSION

DR. WILLIAM CLARENCE WEBSTER, New York city, agreed with Mr. Hubbert in favoring appointive *vs.* elective state and local boards of education, and concentrated authority in central city boards, and in not favoring a *national* centralization of educational administration. Dr. Webster also pointed out in detail many excellent features of the Massachusetts plan of educational administration, including supervision by state agents, compulsory regulations concerning evening schools, day and evening high schools, mechanical and industrial drawing, manual training, free text-books, compulsory attendance, sanitary regulations, and the "township system;" all of which features of the Massachusetts plan were strongly favored by the speaker. Much of the average excellence of the Massachusetts public-school system was attributed to the salutary effects of the above state control and centralization.

Dr. Webster, however, went farther than Mr. Hubbert, and advocated a still greater degree of state control and centralization in educational administration, on the ground that the local school systems would thus be made more efficient. Every state ought not simply to have as much centralization and state control as Massachusetts, but many of the states need a much greater degree of such control. One fundamental reason for extended state control and quite thoro centralization in educational administration exists in the fact that in most states either a majority or a very large part of the communities have not developed a public opinion sufficiently enlightened voluntarily to provide good schools. The interests of the various states at large, as well as the real interests of these same communities, demand the very best possible educational facilities. The backward communities must be coerced into developing good schools by some outside authority which is inspired by the highest educational ideals and thoroly awake to the best methods of carrying out these ideals. This, in a last analysis, is the chief ground for, and the best justification of, extended state control; and this is sufficient ground for almost any degree of state control and centralization of educational administration, the real effect of which is to make better the local school systems and increase the efficiency of educational administration. Massachusetts, with a high average of public enlightenment concerning the value and importance of good schools, owes much of this present high average to state control. Other states surely need as much such control, and many states need much more owing to the much lower average of public sentiment.

Dr. Webster then suggested and definitely argued for the following kinds of state control and centralization: (1) A *compulsory* local school tax. (2) More state aid than in Massachusetts to supplement local taxation, either in the form of a permanent school fund or a state school tax. (3) Thoro state control and administration of the school census to avoid "padding" of census returns for private profit and for larger local apportionment. The New Jersey plan was recommended. (4) State control of the examination and certification of teachers. The New York, New Jersey, and Indiana plans were described, and that of New York was especially recommended. (5) Thoro state control of teachers' institutes, including state selection of institute instructors, state regulation of courses of study, and compulsory attendance. The Wisconsin plan was especially recommended.

(6) Central enforcement of compulsory attendance and truant laws. The Connecticut plan of providing a state agent to superintend the enforcement of these laws was recommended. (7) Central appointment of county superintendents and at least partial support of these officials by the state. (8) A more extended and independent appellate jurisdiction of the state superintendent of public instruction, as in New York and a few other states.

The speaker concluded his discussion by trying to dispel the popular idea that increased centralization in educational administration is un-American and something to be feared as savoring of imperialism and despotism, and by pointing out that it is rather to be welcomed as one great means of salvation to the American public-school system, especially in its weaker places, by compelling the weaker places to become strong under the stimulating direction and coercion of efficient central administration.

MANUAL TRAINING—ITS PURPOSE AND VALUE

BY JOB BARNARD, MEMBER OF BOARD OF EDUCATION, WASHINGTON, D. C.

While the National Educational Association has had for many years a department in which "manual training" has been discussed in all its phases, this is the first time that the Department of School Administration has undertaken to consider the subject. It has received such general attention, however, and has actually been in vogue in its various forms, and under widely differing conditions and circumstances, for such a length of time, and with such favorable results, as to carry it beyond the stages of experiment, and to insure it a permanent position in the public-school system. This being conceded, it is incumbent upon the officers and boards represented in this department to make provision for it in the most liberal and general ways that may be found useful or expedient, in their several localities.

Many municipalities have already provided commodious, convenient, and substantial buildings, with machinery and power, tools and material, and a corps of good teachers, for the use of these schools, their pupils usually coming from the high schools. We are happy to be able to state that Congress has just placed its approval upon this kind of education by an appropriation of $12,000 for the establishment of kindergartens in the public schools of this district, and $125,000 for the purchase of ground and the erection of a building for a manual-training school.

We need more kindergartens, and more such special buildings for the manual-training schools, all over the country, with the best teachers that can be obtained; but we also need smaller shops and convenient rooms in the vicinity of the graded schools, where pupils of every grade may have the advantage of this kind of training, modified to suit their several stages of advancement and growth.

The title of this paper, suggested by the Executive Committee, admits of the consideration of the subject in its broadest sense, in order that its general purpose and value may be ascertained. In this sense we may assume that manual training includes all systematic training of the various faculties of the body, as part of a general scheme of education, by actual *doing*. This doing of real work cultivates the motor nerves, as well as the nerves of sense: it develops the muscles and tissues of the body; it stimulates and strengthens the brain.

To be of use in the city, the central office or telephone exchange must have wires running to and from it, which can there be connected. If the wires all terminated at the central office, without possible connection, the messages sent might cause a plethora of knowledge at that point, but of what use would it be to the business of the city?

So, if the brain was constituted and disconnected in such manner that all the impressions or dispatches received by it from the outposts, the extremities of the body, or from any part of the environment in which the body moves, were retained by it, and there were no motor nerves by which this knowledge could be expressed or sent out again to other brains, no progress could be made, and the accumulation of knowledge by any individual mind could be of no use to others.

But happily it is a law of life that so soon as the child acquires knowledge, it endeavors to give it expression by word or act; and by the getting and giving of knowledge the sensor and motor nerves are both used and developed; and the brain to which they are both attached becomes the useful central office or exchange, and is expanded and strengthened by its use.

There is one fact which seems to distinguish manual training from all other kinds of education, namely this, that it involves a plan, pattern, or idea, simple or complex, to be thought out, formed, and executed.

This requires mental effort first, and then a positive physical exertion to express the conception in material form. It also requires the concurrent operation, and the co-operation, of mind and body, and not the exercise of either independently. We must think while we work, and work while we think. If we would obtain useful knowledge, we must not only read, hear oral teaching, commit to memory, and meditate on what we have learned, but we must endeavor to tell what we know to others, and to apply our knowledge to the practical uses of life, by doing with our might whatsoever our hands find to do.

By this the *doing* faculty is not only developed, exercised, and matured, but the *knowing* faculty is also enlarged, disciplined, and made more reliable. When we try to teach others what we think we know, we are surprised to find out that we are not certain of our knowledge.

Speaking literally, manual training means the training of the hands; but as hands are symbols of power, their training really signifies a systematic use of the whole body so as to put it under the control of the mind, and thus to acquire power to execute skillfully, accurately, and promptly whatever is undertaken by the mind. The doing of the thing planned is not, in the educational sense, for the purpose of making something of commercial value, or for teaching a trade; but it is for the purpose of acquiring the *power* to do as one *wills* to do. It is for the purpose of mind-making, sense-sharpening, brain culture; to have all the faculties of seeing, hearing, tasting, smelling, and feeling quickened, cultivated, and perfected; and to create the power to form correct judgments.

Many years ago I read a story written by Henry Ward Beecher, entitled *Norwood*, and I remember only a single sentence and a single character in the book. The character is Abiah Cathcart, a New England farmer, of whom the author said that "he first thought out his work, and then worked out his thoughts."

This is what is required of every pupil in a manual-training school.

As a layman I may be excused if I make a mistake by claiming too much; but I think the term is broad enough to include kindergarten work, drawing, penmanship, cooking, cutting, fitting, and sewing, modeling in clay and sand, with or without other tools than the hands themselves, as well as tool work in the shops; but I believe that the term, as defined by schoolmen who have given the subject much careful study, is more restricted in its meaning, being strictly used to include only "the training of the hand in the use of tools, and in practical drafting, as a part of a system of general education." It is claimed by them that it does not include kindergarten work, laboratory work in science, and illustrative teaching, on the one hand, or teaching of trades, on the other.

Mr. John Chamberlain, director of manual training in this district in 1890, prepared a teachers' manual in which he defined the term, as then understood here, in the following words: "Manual training, as understood in the public schools of this city, includes everything in the course of study in which *the hand does a part*. It includes clay modeling, stick laying, and paper cutting and folding in the lower grades; free-hand drawing in all grades; paper-model making, sewing, cooking, and bench work in the upper grades; and cooking, free-hand and mechanical drawing, moulding, forging, and machine work in wood and metal, and work in botanical, physical, and chemical laboratories, in the high school."

Since 1890 the sewing department has grown to include cutting and fitting, five schools being now conducted for this work, and attended by the girls of the sixth grade. Plain sewing is taught to girls of the third, fourth, and fifth grades only, and in the rooms devoted to other school purposes. The girls of the seventh and eighth grades attend the cooking schools, but sewing is not taught to those above the sixth grade. Modeling in clay, from nature, is taught to the pupils in all the grades; and carving in clay is taught from the fourth to the eighth grade.

It has been the aim in the Washington schools to make some form of manual training applicable to every child in every grade from the kindergarten to the high school. This has involved some original work, or modifications of the work more frequently taught in the secondary schools. How well we have succeeded in our aims must be left to others to judge. We do not claim that we have attained perfection, but we do claim that an examination will disclose an application of the practical idea of manual training in every year of public-school work in this district, as a purely educational exercise.

We have fifteen shops, located conveniently for the boys of the seventh and eighth grades of the white schools, where carpentry is taught. Here they design and make those things usually designed and made in such schools. They are allowed much freedom in choosing the article to be made, within certain limitations, and whatever is undertaken is constructed on correct scientific principles. They make boxes of different shapes, screens, stools, tables, stands, desks, bookcases, cabinets, and other things. The boys of the Central High School attend the machine shops on O street, between Sixth and Seventh streets, where they have use of steam power. There are six carpenter shops for the boys of the colored schools, located singly, three in the city and three in the district outside the city, besides three in the Miller Building on H street, between Sixth and Seventh streets, where they have steam power, and where one machine shop and one blacksmith shop are also located, making eleven shops in all. Mr. J. H. Hill is the director in charge of the Miller Building and the three carpenter shops in the city; and the three in the district outside the city are under Mr. Chamberlain's direction. The colored boys of the sixth, seventh, and eighth grades, and a few from the fifth grade, attend these shops. The colored high school also sends a few boys to the shops in the Miller Building.

The girls from the colored schools are learning sewing, cutting, and fitting, and cooking, with as much interest as the white girls.

For further details of the work of our schools, and for some very interesting and able papers on this subject, I refer to the report of our board of trustees for the year ending June 30, 1897, particularly to the valuable report therein of Superintendent William B. Powell, and of Director John A. Chamberlain. Besides these, the reports of Dr. F. R. Lane, director of the high schools; Mrs. Susan E. W. Fuller, director of drawing; Mrs. E. S. Jacobs, director of cooking, and Mrs. M. W. Cate, director of sewing, all contain interesting matter on the subject of manual training. In the same volume the report of the various officials and teachers of the colored schools will also be found of much interest, as showing how readily the pupils of these schools take hold of practical work of this kind.

The purpose of manual training, as already indicated, is to raise the standard of character and scholarship, and to develop more evenly and perfectly the growing mind. It is to teach the children their own capacities for doing things; how things can be done; what it is possible for willing hands to accomplish, and what is beyond their power. It is to inspire self-reliance and confidence in the intelligent, and to check the egotism of the ignorant.

While its purpose is educational, and its greatest value to develop the mind, to

> "Hew off the block, and get out the man,"

there are other incidental results which may be expected from this training, all of which have their value.

It helps the young man or woman to decide with better judgment upon a vocation; it removes prejudice and inspires respect for those who do the work of the world; it increases the intelligence of the mechanic, and enables him to do better work and to command higher wages; it lessens crime by furnishing something useful and interesting "for idle hands to do;" it discourages the growth of that helpless, impracticable individual who is educated above his capacity and has more knowledge than he can use, and who is characterized by Pope as "the learned blockhead, ignorantly read, with loads of learned lumber in his head."

Another result that may be expected from this training is that it will make men and women more trustworthy, more capable of truth-seeing and truth-telling. The eye is trained to see correctly and positively, and the mind to judge truly at the same time. If sight is clear, and judgment sound, and expression accurate, then the bystander, on whose testimony life, liberty, and property often depend, and who has no wish to give any false impression, is enabled to tell the truth, and justice is done to the neighbor. The witness who is most capable of telling the exact truth, according to my observation and experience of many years in the trial of cases before judges and juries, is the man who has been trained in designing, drawing, and making things. The civil engineer, the architect, the builder, are representatives of this class. They can tell what they see so as to make others see it correctly. They can distinguish between a condition and a theory, between a fact and an illusion between the true and the false; and their evidence will often enable a court to reach a just conclusion where otherwise it would be impossible.

I suppose that every boy raised on a farm has always wanted to do something that was beyond his ability to do well, rather than to content himself with doing such work as he could properly do. The reason of this seems apparent. It is the self-activity of the growing boy; he is reaching out for something more than he himself can do; something that a man does. The work usually assigned to him, such as turning a grindstone, using a rake or hoe, feeding the stock, and bringing in wood, is all well enough from an economic standpoint, but it is mere drudgery to the boy. There is no mind in it; it requires no thought, no planning, no designing; he wants to "make a hand," and take on the responsibility of some job on his own account. As soon as he learns to do a thing automatically, without thinking about it, there is no more education in it; and from an educational standpoint it would be better to set him a new task; or, what is still better, if possible, give him his choice of two or more new tasks.

In the winter the country boy usually goes to school, and does chores night and morning, with a full day's work on Saturday. When spring comes, he probably has to quit school and help in the field.

As a rule, the city boy has no such opportunity for the exercise of his self-activity in manual work, and hence does not get the vigor of mind and body, by mixing study with work, that the country boy does, and for this reason needs the manual-training school most, and needs it early in his school life. The boy that grows to maturity on the farm not only lays in a good supply of energy, but actually accumulates considerable general knowledge, if he is inclined to take advantage of "rainy days and Sundays" for reading and study; and yet he knows less, as a rule, than the city boy. Why is it, then, that he so often outstrips the city boy in the race of life, and becomes distinguished as a man, when he enters upon a career of business or politics in the city?

I think it is due to the power to execute; and this executive ability is acquired by the actual doing of things in the growing period, when brain and muscle, will and understanding, are being made in the daily life on the farm.

I once heard a prominent member of the cabinet deliver an address at a banquet on President Lincoln's birthday. He said that Mr. Lincoln was sometimes spoken of as an uneducated man. He wanted to correct history, in so far as that impression might have been received. He said that Mr. Lincoln had unusual educational advantages. Thrown upon his own resources in early life, he had learned and practiced all kinds of work on the farm, and with his father's carpenter tools; had lived in three new states of the union; had aided in building a flat boat, and making two voyages to New Orleans with produce for market; and in his leisure moments had learned to read, write and cipher, and had acquired a taste for good literature, all before he was twenty-one years of age; and such a life of work, travel, and study, while he was growing up, had laid the foundation for that noble character, that gentle soul, that intellectual power, that made him so much loved and honored.

I need not now take time to give you other instances where character and learning, acquired under similar circumstances, have led to the highest positions of trust and honor in this country. They are familiar to all; your reading and acquaintance will suggest many such.

Where the work performed is wholly planned by some other mind, and the one that executes is merely the hand of the other, there is not that growth of brain and nerve for either that there is where the mind that plans and the hand that executes are united in the same person. Hence, while there is a great discipline in working in factories, for railroad companies, in telegraph offices, in all kinds of machine shops, the education is not so beneficial as where the workman has to use more mind. It is true, he acquires regular habits, and a quick ear, a steady hand, a sound judgment about the special thing he is set to do, but learning only one thing, that soon becomes mechanical, and the mind does not increase from the merely automatic bodily activity.

The great numbers now being educated in agricultural colleges, technical, industrial, and trade schools, make it evident that there is a growing demand for better-trained men and women to do the higher class of work required by our advanced civilization. The public school should assist in supplying this demand, and in fostering the inclination for such courses in the minds of its pupils.

Mind, when reduced to its simplest terms, is composed of only two faculties: will and understanding. These may also be represented by the terms affection and thought, impulse and intellect, love and wisdom, heart and head, goodness and truth.

Both of these faculties must be exercised and cultivated, if a perfec mind is to be formed. The will, or the desire to do and to have, is not to be repressed, but is to be drawn out, directed, and instructed until the understanding matures and the judgment is formed.

The pure imagination and the good emotions are to be awakened. The perfect form of created things should be made plain in thought; and then the thought should be clothed, or embodied, or ultimated in the material form.

The pupil in the manual-training school should see clearly that every picture, statue, house, school, cathedral, city, monument, car, bridge, ship, everything made by the hand of man, first had its existence in the will. To carry out the will or desire of the builder, he had first to study the subject so as to arrange the details in mind and form his plans in thought; then to gather and prepare his materials, and put his working plans on paper; and then to attain the end wished for by giving the thought the material body in which it can be seen by others. Thought can never become visible except when it takes on a material form, either in spoken words—sounds formed by the vocal organs, or written words—symbols formed by the pen or type; or pictures; or the concrete form, made by the hands, tools, and machines, from wood, stone, metal, or other material.

By all this training the will is developed as well as the understanding; the emotions are cultivated; the taste, the love, the affections, are elevated and purified; and the whole man is perfected, morally, physically, and intellectually; and this is the end and value of all true education.

THE TENURE OF OFFICE OF THE TEACHERS

BY B. W. WRIGHT, MEMBER OF BOARD OF EDUCATION, ISHPEMING, MICH.

We live in a time of great competition and rivalry and of ceaseless energy, where push is expected and justly admired. It is an age, also, when it is thought by some that change is the chief indication of progress, and that long occupancy of a position provokes dry-rot. So they call tried capability and usefulness barnacles and inefficiency, and think epithets have settled the question. They observe with no regret the departure of the old year, but welcome with rapture the arrival of the new, apparently merely because new. Yet withal, Father Time still controls the years, and they are joyous over the sentiment for freshness while aged experience still directs.

Civil service is not popular, because this class of politicians claim that changes must be made, and merit is not to be considered. By their standard placidity is thought to be stagnation. They forget that great power is often connected with smoothness. They seem to desire a little friction and an occasional smashup to convince them that the machinery has been in operation.

Being a public matter, our school management unfortunately comes under the ban of a class which criticises and condemns in a superficial way the entire school system, and insists upon radical measures. Prominent among these is a demand for frequent changes in the teaching force. Especially is this the case where politics dominate in school elections, and school trustees trim their sails in the endeavor to catch the popular puff which shall waft them into the desired haven of public affairs.

This is an unfortunate condition, and happy is the community where such is not the case, but where there is a proper appreciation of the important place a teacher occupies, as an individual as well as in the schoolroom.

I am friendly to young teachers, for there are many to whom experience is yet a stranger, who are willing and worthy, but are untried, who should have encouragement and assistance; but experience should always be preferred in considering qualifications.

The position of the teacher is unique, because she not only instructs from text-books, but is the model in morals, manners, and etiquette as well. She is a living example, and upon her pupils is stamped her character. Her deportment is imitated, her speech echoed, and her costume is an object-lesson. She is certainly "known and read" by all children, and should have as well a refining influence upon the homes of her pupils.

Her authority extends beyond the narrow confines of the schoolroom, and is acknowledged and quoted wherever the child may be. This being so, will not long service accentuate her influence and increase her value to the community? In the high school she is liable to be associated with the same pupils for a period of four yours, if continued as suggested. In the grades her contact with individuals is for a shorter time, but children of the same family often succeed each other there, and the knowledge of family traits should be of considerable help in teaching the "young idea." Meanwhile the teacher, also, is gaining something new and valuable by experience, and her power is expanding the longer she is in contact with these surroundings.

I believe the patron of the schools desires the continuance of good teachers as long as the service is faithful. "I wonder," said an experienced high-school principal, "if I shall ever be thru with the Jones children." "I hope," replied a mother within hearing, "that you will not quit teaching before the Smith children are thru."

Progressive, wide-awake teachers should be appreciated and retained so long as they are willing to stay, not as a favor to them, but in justice to them, the school, and the taxpayer.

In no better way can the public money be expended than in the continuance of the cost of their service. In a thriving city of the upper peninsula of Michigan there are several teachers whose years of continued service have been many, and, with no discredit to their associate instructors, it can be said that their success is as positive, and their hold upon the pupils and patrons as strong, as those of any of the others of a large corps employed. Their constant labor does not seem to have impaired their enthusiam, and their acquired knowledge of methods and wide experience is certainly invaluable to the youth in their charge. The last five years of their work have been unequaled by any previous ones.

My attitude as to the tenure of office of the teacher is plain, but should be qualified. My support will not be given to the lazy teacher, even for a short service. I do not think the public money should be expended in paying the salaries of these persons, who have no higher ideal than to teach merely for a little pin money or to help out in a stylish wardrobe. I would not grant a long commission, either, to the individual who resigns without any consideration of business honor, to obtain a larger salary or to clinch a matrimonial chance.

But the honest toilers in the educational ranks who have just appreciation of their opportunities, and the possibilities also, and who therefore have an earnest purpose in their life work, should challenge our admiration and co-operation.

If you have in your schools a competent teacher, gifted with broad scholarship, high aims, and agreeable presence, who conscientiously desires to do her best, who loves children, who takes a high place for good in the community, who is loyal to the town that supports her, whose fidelity to the school board and superintendent needs no demonstration, who is in accord with the system instituted by the latter, and who has the true spirit of affiliation with her associate teachers—you have an aquisition which should be retained, if possible. There are many such, and only a matter of salary, probably, will induce them to leave your employ.

Experiment very little, if at all. No one will deny that the position of the public-school teacher is one of trust and responsibility. We intrust to her care our children, expecting that she will inspire them with love of country and our country's God, and teach them how to think and how to live, so as fittingly to endure the contingencies in life's struggle; and we hope she will feel a lively interest in their moral, social, and physical wellbeing also. To fit herself for such a task has required years of preparation in the cultivation of natural tact and ability. Shall we place such capacity and acquirements on a level with those required of the day laborer or hired man, and grant her no feeling of security in her position? Business sense dictates a negative reply.

We continue honest and competent employees in places of private trust so long as they study our interests. Shall we do less in the employment of a teacher? A teacher who has become well acquainted with her environment will accomplish more than a newcomer, and, knowing the methods of the superintendent, can with much greater ease keep up the work.

Not unnaturally there are many influential "outs" who are sure that the situation would be greatly improved by an exchange with "ins," but the school board must withstand the pressure, weigh impartially grievances and complaints, and not be governed by the standard of prejudice or personal favor. That is one of its functions, and it must firmly assume the responsibility.

A competent authority in Chicago is quoted as saying: "It is the opinion of nearly all of the more experienced teachers that a woman is much more capable after fifteen years of labor than is she who has had only six or seven years' experience. We think that such a long and conscientious service should be recognized above that of another instructor who has worked half or a quarter as long."

This is in line with business experience, and should be carefully considered. We boast that our public schools represent a supreme interest in life, for in them is laid the foundation of society and citizenship, built with living stones. Let us sustain, then, as much as possible the great number directing this movement, by assuring them not only of a place in our appreciation, but substantial support in their position, during good behavior; for scholarship, adaptability, fidelity, and loyalty, with good health and clear brain, are deserving of recognition.

In considering the subject assigned me I have spoken of woman, because she is most in evidence as a teacher, and therefore, if for no other reason, entitled to the greatest consideration in this paper; but you may, if you choose, apply what has been said to man also, and will, I trust, admit that under ordinary circumstances, with a true desire for the good of our schools, the greatest benefit will accrue by permitting as little change in the teaching service as possible, when the talent employed is worthy.

And, above all, do not think that a spirit of unrest, often prevalent, is always indicative of progressive ideas, for often behind it all are the selfish aspirant for position, the "chronic kicker," and the stingy taxpayer, while possibly misinformation is their chief bulwark.

Intelligent criticism must be heeded and ignorance convinced of its error, otherwise ignored.

Results from the school work will sustain your position, and there let it rest.

THE PROFESSIONAL AND NON-PROFESSIONAL BODIES IN OUR SCHOOL SYSTEM, AND THE PROPER FUNCTION OF EACH

BY A. LAWRENCE LOWELL, MEMBER OF BOARD OF EDUCATION, BOSTON, MASS.

At the very threshold of this subject I want to disclaim any extensive knowledge of the various systems of school administration in the different cities of this country, and of their practical results. The fact is that the school problem, as presented to the school board of the city of Boston, has been somewhat limited in its scope. Simultaneous but independent efforts were made this year to reform the administration of the Boston schools; on the one hand, by an application to the legislature, and, on the other, by a reform in the rules and regulations of the board itself. The former did not succeed, and the latter, which was successful, was necessarily limited by the existing statute, and it was within the limits thus fixed that the new organization had to be constructed. The term for which the superintendent was chosen, the fact that he could not be made independent of the school board, and many other matters, were regulated by statute and were not within the control of the school board. But, altho many of the fundamental principles of the organization were thus prescribed and not within our control, we believe that some of them are, in themselves, wise.

The general principles on which the relation to each other of professional and non-professional bodies ought to be based are easy to describe. It is clear that those matters of detail which require for their administration intricate technical knowledge ought to be left to the expert. It is clear, also, that on questions of general policy the advice of experts is of the utmost importance, and ought always to be sought; and it is no less certain that the opinion of the layman brings to bear on any subject the general common sense of the community, while his instinctive feeling how far public opinion will permit the realization of a plan is of great value as a counterweight to the technical point of view of the expert. It is easy to lay down these principles in general terms, but it is by no means easy to apply them to particular organizations. There is no fixed formula which can be used in drawing the line between the functions of professional and non-professional bodies. Much must depend upon how far the problems to be solved are of a highly technical nature, and how far they are capable of being readily understood by laymen. Much must depend, also, upon the intelligence and capacity of the laymen themselves. One thing is clear: as the problem becomes more intricate, the need of the expert is greater, and his proper functions become more extensive.

In New England, a hundred years ago, when the public school consisted of a small wooden building, heated by a stove in the corner, and when the instruction was limited to reading, writing, and arithmetic, there was little need of an expert management. The farmer on the school committee was quite capable of deciding whether the schoolhouse needed shingling; he knew the three R's himself, and few educational questions arose. If a schoolmaster wanted to carry the instruction of a bright pupil farther, he was welcome to do so, but the main curriculum underwent little alteration. Today education in our great cities includes kindergarten, primary, grammar, secondary, and sometimes mechanical arts, high, normal, deaf-mute, and truant schools; while the courses of study in these schools have increased very much in number, in range, and in complexity. Anyone who does not make it his life's work can no longer become thoroly familiar with the whole subject of public education in a great city. At the same time, the growth of the art of heating and ventilation has added to the difficulty of the school problem on another side, and made the expert advice of engineers indispensable. The very size of the organization, moreover, has made it impossible for a member of the school committee to take a general view of the problems involved, unless he is saved from becoming entangled in the detail; and yet, in New England at least, the relation of the school boards to their experts has remained, as a rule, unchanged. The functions of the professional and non-professional bodies have remained what they were under a condition of things that long ago passed away; and the work that should be done by the experts is done by subcommittees of the board. In short, the organization has become thoroly antiquated.

I have said that relative functions of experts and laymen vary with circumstances. Success in the management of all large enterprises depends, indeed, to no small extent on the skill in using experts, and every man of affairs learns with some accuracy how far he can wisely rely on their advice. Now, if school committees were composed of men of large business experience who remained permanently upon the committee, they would insensibly draw a correct line between their own proper functions and those of the professional officers, without formal provisions on the subject. This is true in our universities, where the legal powers of the various governing bodies are not usually minutely prescribed. They depend rather on custom and experience. But in our school committees, unfortunately, the condition is not fulfilled, and hence the necessity of regulating with precision the exact duties of the professional and non-professional elements.

The fact that school committees have failed to keep up with the demands of the times in the matter of administration by professionals has apparently caused a tendency among some reformers to go to the opposite extreme. The best-known plan of school organization, and one received with general favor, is that proposed several years ago by the Committee of Fifteen. This plan, which has been put into operation in some cities, substantially places the control of the schools in the hands of the superintendent. He appoints the teachers and prescribes the courses of study on his own responsibility; while the school board has no real part in the ordinary management of the schools, and is virtually limited to an occasional interference in some matter that arouses a peculiar degree of hostility. In other words, the schools are administered solely by the superintendent, who can, however, be checked if he goes decidedly too far. This system has, no doubt, a great deal to recommend it, but, on the other hand, it has obvious defects. Three of these may be especially noted.

Such a system eliminates the lay element almost altogether, and this is unfortunate, for purely professional men are liable to lose in some degree the sense of perspective. Everyone who has himself been an expert, who has practiced a profession, must recognize this in his own case. He must have seen the tendency to give undue prominence to technical matters. He must have perceived the advantage of bringing to bear on questions of general policy the good sense of outsiders or laymen. This is, in fact, a matter of common experience. The medical staff of a hospital, for example, always prefers to have men of affairs rather than physicians upon the board of trustees. Our universities and colleges are usually governed in this way, and, on the whole, the system has worked exceedingly well.

Secondly, government by an autocrat is not a bad thing if the autocrat himself is good; but this plan places so much power, so much patronage, in the hands of the superintendent that a great temptation is offered to politicians to get control of the place. We have the politician always with us, and he never sleeps; and if the office once falls into his hands, it is so fenced about that it would be almost impossible to restrain abuse.

The third defect is closely connected with the one just mentioned. When dealing with a subject which touches the whole community so nearly as do the public schools, it is a great benefit to have a body of laymen to act as a buffer between the professional force and the public—a body that sanctions the acts of the experts and assumes the responsibility for them. It is much less important that the superintendent should have his way upon every matter, than that he should be protected from the gusts of discontent that ruffle all democracies from time to time. It is much better that he should be checked here and there, but should be able to pursue his policy in the main without interruption, than that he should be exposed to the constant criticism from outside, and to the danger of failure of re-election which autocratic power necessarily involves. Hitherto the superintendent of schools in Boston has had little power, but his tenure of office has proven secure; and it seems possible to give him sufficient authority to make him the real directing force in education without loading him with a responsibility which would endanger the stability of his tenure.

For these reasons it would seem that the plan of the Committee of Fifteen places too much, just as the existing school organization in New England places too little, authority in the hands of the expert. The true functions of the professional bodies in the school system at the present day would seem to lie between these two extremes. In order to save the school board from being confused by a mass of detail, and in order to have the current administration systematically and consistently carried on, it ought to be the province of the professional officers to attend to all details and all matters of secondary importance. A distinction is sometimes drawn between legislative and executive duties, but this terminology is vague and unfruitful. In the political sense of the term, all the duties of the school authorities are executive; and if, on the other hand, we understand by the legislative the framing of general rules for the management of the schools, so that the school board would be limited to making from time to time a code of regulations, it is clear that those regulations must either be virtually dictated by the professional officers, or else they will be bad.

There are other matters, such as questions of finance, with which a school board is much more competent to deal than it is with the regulations of the schools. I have used the expression "details and matters of secondary importance" in describing those things which are properly attended to by the professional force on its own responsibility, altho this expression is doubtless vague. In matters of great consequence it would seem proper that the professional officers should act as the motive power or mainspring of the organization; taking the initiative in proposing any policy, but leaving it to the board to decide upon the wisdom of the suggestions made, and to assume the responsibility for them. Moreover, in cases where political pressure is likely to be used, and where action is liable to entail unpopularity, such as the appointment of teachers, it would seem an advantage to have the decision of the professional officer confirmed by the board, so that it may share the responsibility with him. The chief point in which the plan thus outlined differs from that proposed by the Committee of Fifteen is that, except in matters of detail, the superintendent, instead of acting on his own authority, must persuade the school board that he is right before he acts.

These principles are carried out under the new rules of the school committee of Boston by giving to the superintendent power to attend to all matters of detail, to execute the regulations and orders of the board, and to make any arrangements and give any directions not contrary thereto. For this purpose he is to be assisted by a body of supervisors and directors of special subjects, who are under his control, and to whom he may delegate any part of his authority. He is further given power to appoint, transfer, and remove teachers, subject to confirmation by the board; and, in order to insure for his opinion its proper weight in questions of general policy, it is provided that all proposals to change the regulations of the schools, or the courses of study, must originate with or be referred to him before they can be acted upon by the board. Partly for historic reasons, and partly in order to relieve the superintendent from the persecutions of book agents, the duty of recommending textbooks is vested in the board of supervisors, of which he is *ex officio* the chairman. This body also conducts examinations, both of the pupils and candidates for teachers, and grants the certificates.

The superintendent is expected to be the leader and guide of the board, and he is, therefore, authorized to take part freely in all debates. In fact, his relations with it are made as close and confidential as possible, and with this object it is provided that, if he wishes to make a confidential communication, he may require the board to go into executive session, while any member who so desires has the same privilege for the purpose of asking a confidential question of him. Moreover, in order that he may explain freely and openly the reasons for his appointment and removal of teachers, it is provided that all discussion of such matters shall take place in executive session of the board. This last provision is a necessity, for the board cannot hear a real statement of the merits of a candidate or the defects of a teacher in a session that is open to the public. In many places all this is virtually done in a subcommittee, but one of the main objects of the change of organization in Boston was to do away as far as possible with the action of subcommittees, and have all the work which is not committed to the professional officers alone done in the full board, so that every member may, as far as possible, know what is going on, and have an opportunity to express his opinion about it.

The fullest benefit of the experience of the teaching force cannot be obtained unless it is recognized and given a legitimate influence in school policy. There is in Boston an association of head masters, and some years ago it addressed a petition to the school board, but was informed that when its advice was wanted it would be asked for. Such a position is certainly wrong, and, in order to give the teachers a chance to form and express their opinions, it is proposed to establish a school faculty, which shall have a right to address the board, and to which certain questions must be referred. This part of the plan has not yet, however, been enacted by the school board, and there are differences of opinion in regard to its detail; but it will be brought forward for consideration in the autumn.

In every well-considered plan for school organization both the professional and non-professional bodies must have their place, and no plan can work well unless there is harmony between these two elements. The ideal system would seem to be, not one which separates those elements and, clearly defining the duties of each, puts them into antagonistic positions, but one which makes them co-operate with each other. This we have attempted to do in Boston. Whether we have succeeded, whether the two elements will work smoothly together, or whether there will be friction between them, can be determined only after experience. In its chief outlines the plan adopted resembles closely the method of university government which is common in America, and, in fact, the plan was originally based upon that model. For our universities the system has, on the whole, worked exceedingly well, and, if properly adapted to the schools, we have certainly a right to hope that it will work well there also.

LIBRARY DEPARTMENT

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY, JULY 11, 1898

The meeting was called to order at 3 P. M., in Wesley Chapel, by the president, L. D. Harvey.

An address of welcome was made by Henderson Presnell, librarian of the United States Bureau of Education.

In the absence of J. C. Dana, chairman of the Committee on the Relations of Public Libraries to Public Schools, the report was read by S. S. Green, Worcester, Mass.

The president announced that the absence of Miss Linda Eastman, Mr. James Russell, Miss May Wright Plummer, and Miss L. E. Stearns would compel the omission of their papers.

The following papers were then read: "The Purpose of the School Library," by Richard Hardy, Ishpeming, Mich; "The General Subject of Relations of Libraries to Schools," by S. S. Green, Worcester, Mass.; "The Best Literature for the Early Adolescent Period," by Miss Susan F. Chase, Buffalo, N. Y.

The president announced that he had secured from the Board of Directors the desired appropriation of $500 for continuing the work of the Committee on the Relation of Public Libraries to Public Schools.

A general discussion followed.

The following committee on nominations was appointed:

Richard Hardy, Ishpeming, Mich.
Sherman Williams, Glens Falls, N. Y.
Miss Susan F. Chase, Buffalo, N. Y.

SECOND SESSION.—TUESDAY, JULY 12

The session was opened at 3 P. M. with the report of the Committee on Reading Lists and Editions for the Several Grades of Public Schools, presented by the chairman, F. A. Hutchins, of Wisconsin.

In addition to the report, as printed, the committee recommended that one committee of five members be appointed, instead of two, as before, the new committee to be charged with the duties of the two former committees. The entire report was adopted, with its recommendations.

The president announced that, as money had been appropriated for the use of this committee, its members would be appointed by the National Council of Education.

A paper on "Reading Lists for Public Schools" was then read by Sherman Williams, of Glens Falls, N. Y.

In the absence of Frank C. Patten, of Helena, Mont., his paper on "How to Interest the Public in Children's Reading" was omitted.

A general discussion followed.

On motion, it was carried that the president of this department be asked to make arrangements for representing library work on the program of the next meeting of city superintendents, to be held in Columbus, O.

Acting on the report of the Committee on Nominations, the present officers were re-elected for the ensuing year as follows:

President—L. D. Harvey, Milwaukee, Wis.
Vice-President—J. H. Van Sickle, Denver, Colo.
Secretary—Miss Myrtilla Avery, Albany, N. Y.

MYRTILLA AVERY,
Secretary.

PAPERS AND DISCUSSIONS

REPORT OF COMMITTEE ON RELATIONS OF PUBLIC LIBRARIES TO PUBLIC SCHOOLS

The Committee on the Relations of Public Libraries to Public Schools submits the following by way of a preliminary report:

We recommend that a committee on this subject be continued, and that it be instructed:

1. To make a careful examination of the relations now existing between libraries and schools.

2. In making this examination, to pursue its inquiry in such a way, by means of circulars and thru the columns of educational and library papers of the country, as to inform the largest possible number of school and library people of such things, now being done, as seem to bring about helpful relations between schools and libraries.

3. To examine with care into such questions as the following:

(*a*) How to induce librarians to acquaint themselves with the needs of the schoolroom; and how to induce teachers to make themselves more familiar with the possibilities of public libraries.

(*b*) How to encourage normal schools to give more instruction in the use of books and libraries.

(*c*) How to induce high schools, colleges, and universities to establish "schools of the book."

(*d*) How to promote the introduction of schoolroom libraries.

(*e*) How to induce more public libraries to open special departments for children and teachers.

(*f*) How to increase the interest of parents in the reading of their children.

(*g*) How to make more accessible for parents and teachers select and annotated lists of books for the young, and how to promote their use.

(*h*) How to promote close relations, thru joint meetings and otherwise, of parents, teachers, and librarians.

(*i*) How to encourage the careful treatment of books by young people.

(*j*) How to arrive at conclusions of value in regard to the treatment of young people, as far as reading is concerned, during the adolescent period.

(*k*) How to convey to school boards and teachers in remote districts a sense of their needs in the way of good books well used, and information as to how such books can best be secured.

A careful consideration of the work to be done leads your committee to urge the appropriation by the proper authorities, for the expenses of investigation and reports, of $500.

Your committee asks consideration of the above report, and additional suggestions for the committee's future work.

Respectfully submitted,
J. C. DANA, *Chairman.*
S. S. GREEN.
L. D. HARVEY.
C. D. HARDY.
MARY W. PLUMMER.
L. E. STEARNS.
SUSAN F. CHASE.
LINDA A. EASTMAN.
J. E. RUSSELL.

THE USE OF THE SCHOOL LIBRARY

BY RICHARD HARDY, SUPERINTENDENT OF SCHOOLS, ISHPEMING, MICH.

The prescribed limitations of the papers will not permit more than mere generalization and assertion. The school library, as a distinct feature of school work, is just coming into general notice, hence deductions upon its worth must be made from an experience that is brief, and its true value will not be known until a more extensive use shall have demonstrated it. I take it that this discussion is to apply to the use of the library in primary and grammar schools, as the value of the library in academic preparation is too well known to require notice or mention. In the field of secondary education there is at present a growing demand for specialization, and as this will require far more adequate facilities for successful work, more will be required in the matter of laboratories and libraries.

Secondary schools, however, are fairly well equipped, and the use of the library is largely for reference. It is to the library below the high school that I wish to direct your attention, for here, in the formative period of the child's life, should be begun the work that will have most to do with his weal or woe. As yet the field is an unworked one; here and there are cultivated places where we find efforts at interesting children in juvenile literature, and, from the reports given, most excellent results have followed these attempts; but in 90 per cent. of our schools library work, as such, is quite entirely absent from the grades. It is our duty, then, as members of this department, to set forth the reasons for the faith that we have in libraries, and to urge their introduction into the grades of our public schools. The school library will be of value as a means of reference. It will make the work in history and geography many times more valuable. As these subjects are now presented, children merely memorize cut-and-dried book statements, and recite them after teachers during the class period.

An illustration or two may be of service: An eighth-grade boy studied the movements of the American army about Philadelphia thru Mitchell's *Hugh Wynne*. The teacher took from him his history during the time of this study. When the hour for recitation came, the boy had an information on this subject that was amazing. With the map that he made himself he traced his story to the delight of himself and his classmates. Washington to him was a living personage; the army moved over real land and real water; it fought with guns that were different from any he had ever known until he read. The study of that book made all his future understanding of the revolution far clearer. A seventh-grade class in geography was studying England. The description of the city of London read: "London is the capital of the empire, and the metropolis of the world. It is the scene of many famous buildings, such as the houses of Parliament, Westminster Abbey, and the Tower of London. These are visited by all tourists." And this was the picture of London that the child was given! From the room library, however, a half dozen books were taken; pages were given by the teacher, and the children were set to work. At the next recitation reports were given. Pictures, diagrams of buildings, and vivid descriptions were presented to the class. The dull, meaningless book definition was gone. London became a city filled with men and women who lived and breathed. The children were aglow with enthusiasm. The Abbey meant to those boys and girls what it should mean—the most glorious structure in all England. These are but two commonplace illustrations of the use of the school library. They might be multiplied indefinitely.

Further, the library will develop the reading habit. It will take from the boy his love of the cheap and trashy, and give him a taste for the higher and the better literature. The teacher who is daily brought into contact with the minds of her school will quickly decide the kind of mental nourishment that should be given her pupils. This is a fact of cardinal importance. It is frequently urged that the city library is quite enough. This is a fallacy. The city librarian generally has no time to interest himself in individual cases, and he will give out any book that is called for by the child. It should be the teacher who is to direct the child's reading, and this she can best do by a school library under her direct charge. The results produced will be infinitely better. The school library will enrich all the work of the school, because it will bring light upon subjects of dark and obscure meaning. It will interest the children, because it will provide new means for activity. It will make the teacher's life easier, because it will place within the pupil's reach much that she must otherwise provide herself. It will help thru the period of adolescence. It will make pupils more independent because of the research work that they must do. Nor would I have you believe that the upper grades are alone to be reached. Even as far down as the second grade good results may be obtained. Better that a small child should read Hans Andersen than worry his little brain over nine plus seven. In my judgment the school world has in this library work a means for great betterment. It should receive more attention from teachers. We should be more aggressive in our demands for the tools with which to work, and our labors should not cease until every room has a library of at least fifty well-selected volumes, and every program shows a period for library study. Then we shall know the value of the use and purpose of the school library.

CONNECTION BETWEEN LIBRARIES AND SCHOOLS

BY S. S. GREEN, FREE PUBLIC LIBRARY, WORCESTER, MASS.

ADVANTAGES

It is evident that teachers can do better work if they can avail themselves of the free use of a considerable number of books in preparing themselves for school exercises. This use makes their instruction more comprehensive and full, and more enlivening and entertaining. Such a use of books by children gives a largely increased interest and profit to their studies in geography, history, the natural sciences, English literature, the classics, and other branches of knowledge.

Teachers continually have chances of awakening the curiosity of scholars to find out about various matters. By communicating with librarians they can obtain for them suitable books with which to gratify their curiosity. Teachers often do much to make careful readers by having pupils describe to them the contents of books which they have been reading. Incidentally in doing this work they give a good language lesson. Sometimes libraries have furnished twenty or more copies of a poem or good story to a school, so that every member of a class might have a copy to use in reading in a class and in preparing himself for examination on the character and contents of a book. It is now generally regarded as the duty of the school committee to furnish the numerous duplicates needed in this kind of work, as, in some states, it furnishes other text-books and collateral reading.

It is obvious that work done in connection with schools must cultivate the taste, for great care is taken to send good literature only to schoolhouses. If teachers begin the work described with children in the lower grades of schools and continue it until they graduate from high schools, and do so much of it that most of the time which children have at home or in school for reading will be occupied in gratifying curiosity which has arisen in school exercises spontaneously, or has been awakened by instructors, it is certain that a decided influence must be exerted in behalf of good reading and the profitableness of study. It is noticeable, also, that older members of families read the books which children take home from school.

So much for work in the schoolroom. If teachers and pupils form the habit of going to libraries to get answers to questions, material for compositions and debates, and to make investigations, large or small, and meet there sympathetic and cultivated attendants ready to aid them, they are learning how to use books, conduct inquiries, and get at information. Children learn much at a library if they are only taught there how to use encyclopædias, dictionaries, indexes, tables of contents, page headings, and other means of quickly getting at knowledge.

FEASIBILITY

The Free Public Library of Worcester, Mass., was probably the first in the country to do systematically, comprehensively, and on a large scale the work of helping schools. We have been doing this work for twenty-five years. Two thousand volumes, belonging to the library, are in use by teachers, and by pupils under the supervision of teachers, every day.

In colder weather, a wagon controlled by the school department goes regularly to every one of the fifty schoolhouses in the city to carry books selected from numbers on cards, carried or mailed beforehand to the library, and bring back books that teachers have ceased to need. Children are in daily and large use of facilities for study and reading in the library building. This work which has been done so long and so successfully in Worcester is being done, in a similar spirit, if not in exactly the same way, in large and small places all over the country.

PRELIMINARIES

There should be a perfect understanding at the start between the superintendent of schools and the librarian, they taking care that school committees and trustees know enough of what is going on to keep them from becoming suspicious or inclined to interfere. Interest in the work must be aroused in librarians and teachers, when it does not exist, by addresses and conversation, and they must work together on a plane of perfect equality, as fellow-laborers in the cause of popular education.

METHODS

Teachers have special cards. Thus, in Worcester, every teacher may have two such cards. By means of one of these he may take out six books to be used in preparing for school exercises or for serious study in any direction. Only one novel (for purposes of recreation) can be drawn out by the use of this card.

By means of the other card eighteen books may be taken out to be used by the teacher in any way he pleases for the benefit of his pupils, either in the schoolroom or at their homes. A larger number of books can be had if needed. The books are taken to the schoolroom and there displayed. The children thus have a chance to rummage among them and become interested in good books.

The books given out on the two cards can be kept two weeks, and, by sending word, renewed for two weeks additional. Often they can be kept for a longer time by especial arrangement.

The number of volumes which can be allowed to a teacher for his own use and that of his pupils depends in any town upon the size of the library. The length of time which the books can be kept out will be regulated by the same consideration. In this connection the number of duplicate copies of a book in a library has to be considered. It may be remarked here that it is very desirable to buy such a number of duplicates of really good books needed by school children as the means of a library will allow.

As stated above, a wagon goes to every schoolhouse in Worcester regularly to exchange books. In other places street-railway officers, butchers, grocers, persons who carry mail in buggies, stage drivers, and other persons who have occasion to go regularly to the center of a town from outlying portions of the place, can be availed of to aid in the distribution of books.

It should be stated that great care ought to be used by teachers and librarians in selecting books for the use of children.

A large use of pictures is now made by librarians in school work. For methods in their use see Appendix I to the "Eighth Report of the Free Public Library Commission of Massachusetts," 1898.

CHOICE OF READING FOR THE EARLY ADOLESCENT YEARS

BY MISS SUSAN F. CHASE, STATE NORMAL SCHOOL, BUFFALO, N. Y.

According to the *Century* and our later medical dictionaries, adolescence covers a period of about twelve years. Its entrance is thru the "golden gate of childhood," its exit leads to full maturity. The early adolescent period may be roughly fixed from about twelve to eighteen years of age, the later period from eighteen to twenty-four. These age limits, however, are subject to great variations both in individuals and races. The period of early youth, from twelve to eighteen, is a peculiarly trying one to parents and teachers. It is a time of longings and out-reachings. The flood of emotional and intellectual activities mounts to its crest; yet what mental waste within these precious years! How to utilize and direct these adolescent energies is a problem demanding concerted attention. The proper choice of reading during these years, as a help to the solution of this problem, is a most important subject for study.

In December, 1897, a syllabus on reading matter for adolescents was distributed. The purpose of this questionnaire was to find the facts of adolescent reading and from these facts, if possible, to gather suggestions for the choice of reading matter for the earlier adolescent years. The syllabus has been quite generously responded to. Adolescents have written of themselves, and adults have written of their own earlier experiences, or have given their observations of others. In all 719 have responded to the syllabus—213 men and 506 women. The replies have been collated and observations made concerning them. Many conclusions have been made; others could not be reached, for the field is still open to inquiry.

The following are the facts most strongly impressed by reading these adolescent experiences:

1. The power of environment (both home and school) in influencing literary tastes.

2. The book barrenness of the majority of homes—atmospheres stifling to book culture.

3. The almost equal barrenness of many of our schools.

4. The great appetite for reading so often noted between the years twelve to eighteen, and sometimes very much earlier.

5. The enormous waste of reading energy during these intense years and the evils arising therefrom—loss of concentration, injury to memory, vitiation of tastes, morbid sensibilities.

6. The amount of lazy enjoyment of reading and the need of stimulation to thought—book gluttony the ruin of book digestion.

7. The demand for love fiction and overwrought sentiment, beginning early with girls, boys preferring stories of adventure and action, but often awakening later to a demand for love lore.

8. The startling amount of surreptitious reading done by adolescents, 65 per cent. of the men who reported on this subject, and 46 per cent. of the women, admitting a period of secret reading. Motives for such reading: (*a*) reading in stolen time, 13 per cent.; (*b*) reading condemned

books, 23 per cent.; (*c*) clandestinely seeking information, 64 per cent. The depth of meaning involved in this subject of secret reading cannot be revealed here. Parents and teachers have erred in the past. The time for giving knowledge came, and knowledge was not given. Then the curious mind turned to secret, and oftentimes to evil, resources.

9. The value of early cultivation of a taste for good literature as the best preventive of a desire for the bad.

10. The important office of reading aloud in forming tastes. The adolescent loves companionship. . He finds it in the voice of a good reader.

11. Imitation and suggestion powerful over adolescence as over childhood; indeed, powerful thru life; hence the influence of suggestions about books as well as the influence of book contents.

12. The relation of interest to the selection of reading matter for individual readers. The vantage ground is present interests, provided such interests be neither immoral nor debasing—the right books at the right time to the right reader. The proper moment being passed, the value of the book is often gone. The fickleness, and yet the intensity, of adolescent interests is well known. The educator must know the value of the book, and must be quick enough to recognize the moment of the fleeting interest, or strong enough to excite new interest when the old has flagged, or when all interest lies dormant.

13. The absolute necessity for intelligent and sympathetic guidance of young people in the choice of reading; the hunger of adolescents for such guidance; their quick response to sympathy and personal influence.

14. The need of educative centers where instruction may be given to parents and teachers in the proper choice of reading for young people—book ignorance lying at the basis of much wrong leadership, or of absolute neglect.

15. The great educational aim in reading, as elsewhere, "to utilize the tempestuous emotions of adolescence"—to turn the flood of emotional and intellectual activities into ennobling channels; and—

16. Finally, to reach, thru the aid of well-selected reading, that noble end, the building up of character.

This summary of observations lacks the satisfaction of definite conclusions as to ways and means of satisfying adolescent needs. A rich end will be gained when we can answer these questions:

What is the normal adolescent appetite for reading? How shall it be fed? What are the disease symptoms? What is their remedy?

At present our knowledge is insufficient. Certain large investigations must be pushed. Such questions as these must be answered: What are young people actually reading? How far may individual tastes be employed to develop a love for pure and ennobling literature? How stimulate a desire for reading when there is no native desire? In what way lead young people on in the choice of better reading, working always from the standpoint of present interests? How avoid the danger of over-stimulation and at the same time arouse enthusiasm? What amount of independence to allow in the choice of books? How shall we anticipate the temptations to secret reading? How shall we meet the demand for religious culture? At what age should the Bible be put into the hands of the reader? What should be our attitude toward love stories? How far shall we restrict them? Should immature boys and girls be allowed to read the recent, so-called realistic, literature? Shall we prohibit any reading matter? What should be our attitude toward indiscriminate reading of the newspaper by boys and girls? These are a few of the questions waiting to be answered.

The importance of this subject no one can deny. Reading matter for the adolescent, when well chosen, may be the salvation of his body and his soul; or, if chosen ill, may lead him "down, down, down," as Carlyle says, "doing more and more, wilder and wilder mischief."

DISCUSSION

A. R. SPOFFORD, Washington, D. C.— The intimate connection between libraries and schools is of national importance, for very few schools have enough books accessible. A step has been taken in this city to popularize libraries, by opening the National Library from 9 A. M. to 10 P. M., so that government employees and all residents and sojourners of Washington may have access to the books during the day and evening. After years of hope deferred and long and perilous delay, the library of Congress has moved into its new home, built from the appropriation of $6,000,000, so wisely expended that every dollar tells. The building represents the flower of modern architecture, the triumph of modern art. It receives almost unanimous praise. In this casket are accumulated jewels worthy of so magnificent a setting. In one of the upper halls is an exhibit of rare American books. We are now trying to make this the most representative library in the world.

It may not be generally known that here in Washington there is a school of library science, with twenty-one students, organized in 1897 at the Columbian University. Instruction is given in every department of library economy and administration. The attendance is praiseworthy, and the proficiency of the pupils has exceeded all expectations.

F. A. HUTCHINS, Wisconsin.— It is the duty of the teacher to train pupils to go to the library habitually. The trouble with the school library is that the school is closed during vacation and the teachers change. The public library, however, is permanent. Part of the work of this department should be to explain to teachers the value of the public library to the school.

J. H. VAN SICKLE, Colorado.— It seems to me there is use both for the school and the city library. The school library trains children to an intelligent use of the city library. Children cannot select from lists; even as low as the second grade they should have books to see and handle. The city library should, therefore, provide each room with from fifty to one hundred books to be kept during the year. In June they should be sent back to the library for use there during vacation.

F. A. HUTCHINS, Wisconsin.—To use Mr. Hardy's example of a class studying London, why not send books on this subject to the school?

O. F. BARBOUR, Rockford, Ill.—Over a year ago we organized a library section of the State Teachers' Association, and have been working on these problems. We find that many times a taste for reading is formed after the pupil has read surreptitiously. A movement is on foot to help children to read much younger than formerly.

SHERMAN WILLIAMS, New York.—The problems of Miss Chase's paper would largely be answered by the proper use of school libraries.

MR. MCGINNESS, Pennsylvania.—I know a graduate of Harvard who has let his children read all sorts of romances. The result is he has developed, but not his children.

S. S. GREEN, Worcester, Mass.—I recommend the use of the public library by means of cards issued to teachers and pupils.

J. H. VAN SICKLE, Colorado.—We begin with the second grade to furnish libraries of fifty books. The result has been a great demand for library cards when the pupil reaches the fifth grade; at the eighth grade many children have cards in both our public libraries. A demand for reading is created by early use of books.

SHERMAN WILLIAMS, New York.—How do you make the books go around?

J. H. VAN SICKLE, Colorado.—We limit the time to two weeks.

J. E. BRANDEGEE, New York.—It is a great mistake to have the public library under the school authorities. The first notion, then, is that it is a school affair, run for school children; also, the school board is called on for all sorts of expenditures, and the last thing is the public library. In New York the state duplicates library money raised from local sources, to the limit of $200. Thrifty school boards, accordingly, spend just enough to get that appropriation and no more. I know of no instance in New York where the school and public libraries have been separated that they are not both better. The expenditure is, then, made in the open. People will give more willingly for a library pure and simple than if it is the tag end of a school appropriation. The library has its educational purpose; it is the university of the common people.

When the library is under the charge of the school there is disconnected, disjointed management; but the library can attain its greatest success only by co-operation between the teacher and the librarian. Get the children into the habit of going to the public library. There is education in association with a large collection of books. Some child, perhaps, finds a biography there and gets more from it than from all the history he studies in school.

S. S. GREENE, Worcester, Mass.—In Massachusetts the need of free libraries was felt by the state legislature, and one hundred dollars' worth of books was appropriated to every town complying with certain conditions.

W. W. DEWEES, Pennsylvania.—Large towns and cities are likely to care for themselves. Interest centers in rural schools. In my county a kind of circulating library has been established to which country districts subscribe, and books are sent out from the county seat in parcels. It is easier to care for the books in this way than to form a number of small libraries.

SHERMAN WILLIAMS, New York.—Our library is supported by private funds, but we allow free use of the books and access to the shelves. The latter does much good, and not enough books are lost to force us to discontinue the custom.

S. S. GREENE, Worcester, Mass.—Access to the shelves is very desirable in smaller libraries, but imagine it applied to the rare portions of the Boston public library! I once arrested a man who went about from place to place taking out cards for rare books. With common sense, however, access to shelves in ordinary libraries is entirely feasible. Whenever there is doubt, let an attendant accompany the reader to the shelves.

REPORT OF COMMITTEE ON LISTS OF BOOKS FOR READING AND REFERENCE IN THE LOWER GRADES OF PUBLIC SCHOOLS

At a meeting of the Library Department of the National Educational Association, which was held in Milwaukee in July, 1898, a resolution was adopted directing the appointment of "a committee to recommend lists of books and editions suited for reading and reference use of pupils in the several grades of the public schools."

The committee was appointed early in February of the present year, and has prepared, and herewith presents, two lists of books. One list has been prepared for the use of rural schools which have only meager school libraries. The teachers and pupils of such schools have usually read but little, and they need books which are not only wholesome, but which will interest them. In selecting books for their power to interest children from homes where there are few books, the test of experience must be accepted, and the committee has been guided in its choice by reports from many teachers and librarians. To these books of proved interest have been added a few books of information and inspiration, which will awaken new thoughts and aspirations in the minds of the brighter teachers and pupils.

The second list. is more extended, and has been made for graded schools in villages where there are small school libraries.

It is the opinion of the committee that a third list should be prepared for the schools of cities and villages which possess large school and public libraries; which have teachers with the knowledge and tact to train young people to appreciate and love the best literature, and to read widely to advantage.

In preparing the following lists the committee has thought it best to present such courses of reading as will lead pupils to regard books as a means of pleasure as well as of intellectual profit. The books of each list are divided into three classes.

Class A includes those which may most profitably be read in classroom, where the stimulus of companionship and the supervision of the teacher will inspire more thoughtful reading.

Class B includes volumes which may be read to the pupils by the teacher, who can give the occasional explanations and suggestions which are needed to make the text clear to the average pupil.

A large portion of the books of Class C have been selected from those which experience has proved that children delight in reading independently at their homes. It is from books of this class that most children must get that habit of reading good books for pleasure which keeps the mind occupied with clean and wholesome thoughts, and safeguards its fortunate possessor against the evils of idle hours.

It is evident that lists so brief can include only a small proportion of the books that children may read with profit; but it is hoped that they will be found safe guides for teachers who can spend but little money for books, and who wish to buy only wholesome literature in editions which are suited to school use.

F. A. HUTCHINS.
CAROLINE M. HEWINS.
HANNAH P. JAMES.
A. W. RANKIN.
SHERMAN WILLIAMS.
H. R. PATTENGILL.

LIST OF BOOKS FOR RURAL SCHOOLS WITH SMALL LIBRARIES

FIRST AND SECOND YEARS

CLASS A

Scudder, Horace E., editor — Verse and Prose for Beginners in Reading. Houghton, Mifflin & Co. $0.40.

Norton and Stephens, editors — Heart of Oak Books. First book. D. C. Heath & Co. $0.25.

CLASS B

Scudder, Horace E., editor — Fables and Folk Stories. Houghton, Mifflin & Co. $0.40.

Poulsson, Emilié — In the Child's World. Milton Bradley Co. $2.

Andrews, Jane — Seven Little Sisters. Ginn & Co. $0.50.

Andrews, Jane — Each and All. Ginn & Co. $0.50.

Lane, Mrs. C. A.— Stories for Children. American Book Co. $0.25.

Eggleston, Edward — Stories of Great Americans. American Book Co. $0.40.

Wood, J. G.— First Natural History Reader. Boston S. S. Co. $0.25.

THIRD AND FOURTH YEARS

CLASS A

Norton and Stephens, editors — Heart of Oak Book. Second book. D. C. Heath & Co. $0.45.

Scudder, Horace E.— Fables and Folk Stories. Houghton, Mifflin & Co. $0.40.

Eggleston, Edward — Stories of American Life and Adventure. American Book Co. $0.50.

Andersen, Hans C.— Stories. Houghton, Mifflin & Co. $0.40.

CLASS B

Sewell, Anna — Black Beauty. Lothrop Publishing Co.; $1. American Humane Society; $0.10.

Schwatka, Frederick — Children of the Cold. Cassell & Co. $1.25.

Baldwin, James — Four Great Americans. Werner School Book Co. $0.50.

Dodge, N. S.— Stories of American History. Lee & Shepard. $0.30.

CLASS C

Kaler, J. O. (James Otis) — Toby Tyler. Harper & Bros. $1. Seven Little Sisters, and Each and All. See Class B, first and second years.

FIFTH AND SIXTH YEARS

CLASS A

Ruskin, John — King of the Golden River. Ginn & Co.; boards, $0.20; cloth, $0.25. Maynard, Merrill & Co.; $0.12

Hawthorne, Nathaniel — A Wonder Book for Boys and Girls. Houghton, Mifflin & Co.; $0.40. University Publishing Co.; paper, $0.13; cloth, $0.20. Maynard, Merrill & Co.; $0.12.

Longfellow, H. W.— Hiawatha. Houghton, Mifflin & Co. $0.40.

Burroughs, John — Birds and Bees, Sharp Eyes, and other papers. Houghton, Mifflin & Co. $0.40.

CLASS B

Kingsley, Charles — The Water Babies (abridged editions). Ginn & Co.; boards, $0.35; cloth, $0.50. Maynard, Merrill & Co.; $0.12.

Andrews, Jane — Ten Boys who Lived on the Road from Long Ago till Now. Ginn & Co. $0.50.

Alcott, Louise M.— Little Men. Roberts Bros. $1.50.

CLASS C

Black Beauty. See Class B, third and fourth years.

Eggleston, Edward — First Book in American History. American Book Co. $0.60.

Defoe, Daniel — Robinson Crusoe (abridged editions). American Book Co.; $0.50. Ginn & Co.; boards, $0.35; cloth, $0.50. Houghton, Mifflin & Co.; $0.50.

Wyss and Montolieu — Swiss Family Robinson. Ginn & Co. Boards, $0.40; cloth, $0.50.

SEVENTH AND EIGHTH YEARS

CLASS A

Hawthorne, Nathaniel — Tales of the White Hills, including Great Stone Face. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.40.

Whittier, John G. — Snow Bound. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.25.

Scott, Sir Walter — Lady of the Lake. American Book Co.; $0.30. Maynard, Merrill & Co.; $0.24. Leach, Shewell & Co.; $0.35. Houghton, Mifflin & Co.; $0.75. The Macmillan Co.; $0.40.

Longfellow, H. W.— Evangeline. Houghton, Mifflin & Co.; paper, $0.15; cloth, $0.25. Maynard, Merrill & Co.; $0.24. Leach, Shewell & Co.; $0.35.

Warner, Charles Dudley — A Hunting of the Deer, and other papers. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.25.

CLASS B

Repplier, Agnes, editor — A Book of Famous Verse. Houghton, Mifflin & Co. $0.75.

Franklin, Benjamin — Autobiography (abridged editions). Ginn & Co.; boards, $0.40; cloth, $0.50. Houghton, Mifflin & Co.; paper, $0.30; cloth, $0.40 and $0.50. American Book Co.; $0.35.

Hale, Edward Everett — The Man without a Country. Roberts Bros. Paper, $0.30; cloth, $1.25.

CLASS C

Dodge, Mary Mapes — Hans Brinker, or the Silver Skates. Chas. Scribner's Sons. $1.50.

Hughes, Thomas — Tom Brown at Rugby. Ginn & Co.; boards, $0.40; cloth, $0.50. Houghton, Mifflin & Co.; paper, $0.45; cloth, $0.50 and $0.60. American Book Co.; $0.35. A. L. Burt; $0.75.

Coffin, Charles Carleton — The Boys of '76. Harper & Bros. $2.

Alcott, Louisa M.— Little Women. Roberts Bros. $1.50.

Scudder, Horace E. — George Washington. Houghton, Mifflin & Co. Paper, $0.30; cloth, $0.40.

Pyle, Howard — Men of Iron. Harper & Bros. $2.

BOOKS OF REFERENCE

Champlin, John D.— Young Folks' Cyclopedia of Persons and Places. Henry Holt & Co. $2.50.

Champlin, John D., Jr.— Young Folks' Cyclopedia of Common Things. Henry Holt & Co. $2.50.

Foster and Williams, editors — Selections for Memorizing. Ginn & Co. Boards, $0.40; cloth, $0.50.

Bellamy and Goodwin, editors — Open Sesame. Vol. I. Selections of poetry and prose. Ginn & Co. $0.75.

LIST FOR GRADED SCHOOLS IN SMALL VILLAGES

FIRST AND SECOND YEARS

CLASS A

Scudder, Horace E., editor — Verse and Prose for Beginners in Reading. Houghton, Mifflin & Co. $0.40.

Norton and Stephens, editors — Heart of Oak Books. First book. D. C. Heath & & Co. $0.25.

Arnold and Gilbert — Stepping Stones to Literature. First reader. Silver, Burdette & Co. $0.30.

Lane, Mrs. C. A.— Stories for Children. American Book Co. $0.25.

Haaren, J. H.— Rhymes and Fables. University Publishing Co. $0.12.

CLASS B

Poulsson, Emilié — In the Child's World. Milton, Bradley & Co. $2.

Scudder, Horace E., editor — Fables and Folk Stories. Houghton, Mifflin & Co. $0.40.

Andrews, Jane — Seven Little Sisters. Ginn & Co. $0.50.

Andrews, Jane — Each and All. Ginn & Co. $0.50.

Kipling, Rudyard — The Jungle Book. The Century Co. $1.50.

Whittier, J. G.— Selections from Child Life in Poetry. Houghton, Mifflin & Co. $0.40.

Wiggin, Kate Douglas — The Bird's Christmas Carol. Houghton, Mifflin & Co. $0.50.

Eggleston, Edward — Stories of Great Americans for Little Americans. American Book Co. $0.40.

Craik, Mrs. D. M. (Miss Mulock) — Adventures of a Brownie. T. Y. Crowell & Co.; $0.50. Harper & Bros..; $0.90.

Wood, J. G.— First Natural History Reader. Boston S. S. Co. $0.25.

THIRD AND FOURTH YEARS

CLASS A.

Seven Little Sisters. Each and All. Fables and Folk Stories. Stories of Great Americans for Little Americans. See Class B, first and second years.

Andersen, Hans C.— Stories. Houghton, Mifflin & Co. $0.40.

Eggleston, Edward — Stories of American Life and Adventure. American Book Co. $0.50.

Baldwin, James — School Reading by Grades. Third year. American Book Co.

CLASS B

Hawthorne, Nathaniel — A Wonder Book for Boys and Girls. Houghton, Mifflin & Co. Paper, $0.30; cloth, $0.40.

Hawthorne, Nathaniel — Tanglewood Tales. Houghton, Mifflin & Co. Paper, $0.30; cloth, $0.40.

Baldwin, James — Four Great Americans. Werner School Book Co. $0.50.

Baldwin, James — Fifty Famous Stories Retold. American Book Co. $0.35.

Church, Alfred J.—The Story of the Iliad. Macmillan Co. $0.50.

Hawthorne, Nathaniel — Little Daffydowndilly, and Biographical Stories. Houghton, Mifflin & Co. $0.40.

CLASS C

Sewell, Anna — Black Beauty. Lothrop Publishing Co.; $1. American Humane Society; $0.10.

Kaler, J. O. (James Otis) — Toby Tyler. Harper & Bros. $1.

Kaler, J. O. (James Otis) — Mr. Stubbs's Brother. Sequel to Toby Tyler. Harper & Bros. $1.

Schwatka, Frederick — Children of the Cold. Cassell & Co. $1.25.

FIFTH AND SIXTH YEARS

Ruskin, John — King of the Golden River. Ginn & Co.; boards, $0.20; cloth, $0.25. Maynard, Merrill & Co.; $0.12.

Burroughs, John — Birds and Bees, Sharp Eyes, and other papers. Houghton, Mifflin & Co. $0.40.

Eggleston, Edward — First Book in American History. American Book Co. $0.60.

Kingsley, Charles — The Water Babies (abridged editions). Ginn & Co.; boards, $0.35; cloth, $0.50. Maynard, Merrill & Co.; $0.12.

Longfellow, H. W.— Hiawatha. Houghton, Mifflin & Co. $0.40.

CLASS B

Alcott, Louisa M.— Little Men. Roberts Bros. $1.50.

Andrews, Jane —Ten Boys on the Road from Long Ago till Now. Ginn & Co. $0.50.

Wright, Henrietta C.— Stories of American Progress. Chas. Scribner's Sons. $1.25.

Plutarch's Lives (abridged edition). Ginn & Co. Boards, $0.40; cloth, $0.50.

Macaulay, T. B.— Lays of Ancient Rome. Houghton, Mifflin & Co.; paper, $0.15; linen, $0.25. Maynard, Merrill & Co.; $0.24.

Repplier, Agnes, editor — Book of Famous Verse. Houghton, Mifflin & Co. $0.75.

CLASS C

Dodge, Mary Mapes—Hans Brinker. Chas. Scribner's Sons. $1.50.

Alcott, Louisa M.— Little Women. Roberts Bros. $1.50.

Grinnell, George B.— Story of the Indian. Chas. Scribner's Sons. $1.50.

Seawell, Mollie E.— Little Jarvis. D. Appleton & Co. $1.

Defoe, Daniel — Robinson Crusoe (abridged editions). American Book Co.; $0.50. Ginn & Co.; boards, $0.35; cloth, $0.50. Houghton, Mifflin & Co.; $0.50.

Wyss and Montolieu—Swiss Family Robinson. Ginn & Co. Boards, $0.40; cloth, $0.50.

Bolton, Sarah K.—Poor Boys who Became Famous. T. Y. Crowell & Co. $1.50.

Bolton, Sarah K.— Girls who Became Famous. T. Y. Crowell & Co. $1.50.

SEVENTH AND EIGHTH YEARS

CLASS A

Hawthorne, Nathaniel —Tales of the White Hills, including Great Stone Face. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.40.

Whittier, J. G.— Snow Bound. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.25.

Scott, Sir Walter — Lady of the Lake. American Book Co.; $0.30. Maynard, Merrill & Co.; $0.24. Leach, Shewell & Co.; $0.35. The Macmillan Co.; $0.40. Houghton, Mifflin & Co.; $0.75.

Longfellow, H. W.—Evangeline. Houghton, Mifflin & Co.; paper, $0.15; cloth, $0.25. Maynard, Merrill & Co.; $0.12. Leach, Shewell & Co.; $0.35.

Warner, Charles Dudley — A Hunting of the Deer, and other papers. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.25.

Shakespeare —Merchant of Venice. Houghton, Mifflin & Co.; paper, $0.15; cloth, $0.25. Ginn & Co.; $0.50. Harper & Bros.; paper, $0.40; cloth, $0.56. Leach, Shewell & Co.; $0.35. American Book Co.; $0.20. The Macmillan Co.; $0.40.

CLASS B

A Book of Famous Verse. See Class B, fifth and sixth years.

Franklin, Benjamin — Autobiography (abridged editions). Ginn & Co.; boards, $0.40; cloth, $0.50. Houghton, Mifflin & Co.; paper, $0.30; cloth, $0.40 and $0.50. American Book Co.; $0.35.

Hale, Edward Everett — A Man Without a Country. Roberts Bros. Paper, $0.30; cloth, $1.25.

Gibson, William Hamilton —Sharp Eyes. Harper & Bros. $2.50.

Parkman, Francis — La Salle and the Discovery of the Great West. Little, Brown & Co. $1.50.

CLASS C

Coffin, Charles Carleton — Boys of '76. Harper & Bros. $2.

Fiske, John — War of Independence. Houghton, Mifflin & Co. $0.40.

Scudder, Horace E.— George Washington. Houghton, Mifflin & Co. $0.40.

Coffin, C. C.— Old Times in the Colonies. Harper & Bros. $2.

Brooks, E. S.— True Story of Abraham Lincoln. Lothrop Publishing Co. $1.50.

Carpenter, Frank G.— Carpenter's Geographical Reader. Asia. American Book Co. $0.60.

Custer, Mrs. Elizabeth — Boots and Saddles. Harper & Bros. $1.50.

Buckley, Arabella B.— The Fairy Land of Science. D. Appleton & Co. $1.50.

Scott, Sir Walter — Ivanhoe (abridged editions). Ginn & Co.; boards, $0.60; cloth, $0.75. American Book Co.; $0.50. University Publishing Co.; paper, $0.20; cloth, $0.30.

Cooper, James Fenimore — Last of the Mohicans. A. L. Burt; $0.75. T. Y. Crowell; $1. G. P. Putnam's Sons; $1.25. Houghton, Mifflin & Co.; $0.60. Macmillan Co.; $1.

Aldrich, T. B.— Story of a Bad Boy. Houghton, Mifflin & Co. $0.70.

Stevenson, Robert Louis —Treasure Island. Chas. Scribner's Sons; $1. A. L. Burt; $0.75. Robert Bros.; $0.25.

Deland, Margaret.— Oakleigh. Harper & Bros. $1.25.

Pyle, Howard.—Men of Iron. Harper & Bros. $2.

Longfellow, H. W —Courtship of Miles Standish. Houghton, Mifflin & Co. Paper, $0.15; cloth, $0.25.

Brown, Dr. John — Rab and His Friends. Houghton, Mifflin & Co.; $0.60. Maynard, Merrill & Co.; $0.12.

Guerber, H. A.— Story of the Romans. American Book Co. $0.60.

Guerber, H. A.— Story of the Greeks. American Book Co. $0.60.

BOOKS OF REFERENCE

Champlin, John D., Jr.—Young Folks' Cyclopedia of Persons and Places. Henry Holt & Co. $2.50.

Champlin, John D., Jr.—Young Folks' Cyclopedia of Common Things. Henry Holt & Co. $2.50.

Champlin, John D., Jr.—Young Folks' Cyclopedia of Games and Sports. Henry Holt & Co. $2.50.

Beard, D. C.— American Boy's Handy Book. Chas. Scribner's Sons. $2.

Goodwin and Bellamy — Open Sesame. Vol. I. Ginn & Co. $0.75.

Williams & Foster, editors — Selections for Memorizing. Ginn & Co. Boards, $0.10; cloth, $0.50.

READING LISTS FOR PUBLIC SCHOOLS—HOW PREPARED, HOW USED EFFECTIVELY

BY SHERMAN WILLIAMS, SUPERINTENDENT OF SCHOOLS, GLENS FALLS, N. Y.

It is comparatively an easy matter to make a list of good books, and not very difficult to classify them, but to make a list for pupils to read, and one that shall be valuable in the work of creating and fostering in them a taste for good literature, is a much more difficult matter. No one list will answer all purposes, nor will any one list answer the same purpose under all circumstances. Nor will a list that is valuable for certain work under certain circumstances continue to be valuable for all time. The best possible list needs to be changed from time to time. It is quite possible for a reading list, even tho made up of good books, to be positively harmful. It always will be if it tends to make the pupils dislike reading. Among the things to be considered in making reading lists for pupils are:

1. Your purpose.
2. The class of pupils you are seeking to influence,
   (*a*) Their age and maturity of mind. (*b*) Their training. (*c*) Their tastes. (*d*) Their environment. (*e*) The reading they have done.
3. Your facilities for work.
   (*a*) The books that the pupils can already have access to. (*b*) The periodicals that they read regularly. (*c*) Their opportunities for attending lectures. (*d*) The existence of reading clubs.

4. The nature of the community and the help that may be had from —
   (*a*) The public library. (*b*) The press. (*c*) The clergy. (*d*) Principals of schools. (*e*) Teachers. (*f*) Parents.

Let us consider these points somewhat in detail. The primary purpose of reading lists in public schools should be to train pupils to love good literature. We have all classes of children to deal with, and if we succeed in large measure, we must consider them all. We must take them where we find them and gradually develop their taste. We must select books that interest them. In doing this we must select some books that have very little literary merit. If we would shut out pernicious literature, we must at certain periods, for some pupils, provide reading that has little value, save in that it shuts out that which is positively bad.

A taste for good reading is a growth, even when it is an inheritance, and often a very slow growth. There are certain experiences that the normal boy and girl are sure to have in the process of acquiring a taste for good literature, and those who ignore this fact are not likely to be very successful in dealing with them. Some people seem never to have been young, and some others to have forgotten that they ever were. This is unfortunate, if they have to deal with the young. The child will have, and ought to have, the kind of literature that his nature craves at various periods of his development; all that we can wisely attempt is to see that he has the very best of the kind that he wishes. Of course, I am now speaking of those who have not acquired a taste for pernicious literature. In meeting this demand of the child it is not necessary to provide him with any literature that is at all objectionable morally, or particularly bad from a literary point of view. It is more likely to be objectionable because of what it is not than because of what it is. I speak from a large, early personal experience when I say that the taste for the kinds of literature I have referred to is short-lived. It will always be if the child is properly looked after; but if this kind of reading be not allowed, many children will never form a taste for any kind of reading. At the time that most children crave reading that is not of a high order, it rests with us to determine whether that craving shall be gratified by reading books that are harmful, or those that will serve as stepping-stones to better things.

Owing to the great differences of children in school, their training, their tastes, their environment, it is not wise to make a reading list that is arbitrarily to be followed. The list should be quite large and allow a choice. In the list for the children of the same age there should be some books much more difficult than others. Again, the list should not only be divided so as to have a list for each year's work in school, but the list for each year should be subdivided, providing one section for fiction, another for biography, another for travels, others for history, essays, etc. The child should be required to read one or more from each section given in his year's work, but he should be allowed to select that one himself. The first year that home reading is required there should be but one section of books, because there will be some pupils who are not fitted to read anything save very easy juvenile fiction. Poetry should be introduced much earlier than is usually done. Children will read and enjoy Longfellow and some other poets much earlier than is generally supposed.

Reading lists are frequently made for the high school only. This is a very great mistake. Only a very small part of the children ever reach the high school, and those who do will have formed a taste for reading before that time—a taste that will not be readily changed. The reading lists should cover the whole school course. As early as possible the children should be required to do their own reading; before that their teachers should read to them.

In the making of reading lists one must bear in mind the material that can be had. Usually the public library is glad to co-operate heartily in the matter, but in some places there is no public library, in which event the list must include only such books as the school library contains, unless there is some other source of supply. In a small place the superintendent, in larger places the principals, can, without much difficulty, learn what books and periodicals the children have access to at home; and in cases where there is no public library, or school library of much size, this information can be made very useful.

Charles Dudley Warner has said: "To teach a child to read, and not teach it what to read, is to put a dangerous weapon into its hands." I think there is a pretty general agreement that this statement is true, but it is the one thing that very few courses of study recognize as being important. From the time a child has learned to read until he graduates from the high school, he should be held as strictly to a course of reading as to a course in mathematics, or science, or language. It is the one line of work done in school that continues thru life in the case of all the pupils. Yet in most schools little or no attention is given to it below the high school. The work of formation, the establishment of taste and habit, must be begun earlier than that, if there is to be much hope of success with pupils in the high school, to say nothing of the fact that only a very small percentage of the pupils ever reach the high school.

Not every child can be trained to like a given kind of literature —poetry, for example—any more than every child can be trained to love music, art, or mechanics; but every child, every normal child, can be trained to like good literature of some kind. Each child should be required to read some works in the various departments of literature, but there should also be a large degree of freedom of choice. Nearly every book on the list will be read by some one of the children, and they will talk over their reading with each other and influence each other more than their teachers can influence them. They can safely be allowed a large degree of freedom of choice in selecting from the lists, and the lists should be long, if the material at hand that can be used admits of a long list. The matter of learning to choose is in itself of a good deal of importance, because after leaving school they must choose their own reading.

In making reading lists for use in public schools the subjects studied should be considered to some extent. Often a pupil will be interested in a book that gives him help in his lessons when he would not be in any other; besides, the habit of collateral reading is a valuable one. If the pupils attend lecture courses, books bearing upon subjects treated by the lecturers may be accepted for home reading in place of books already on the course.

It is necessary to know in some way that the books have been read, and how they have been read. Probably each superintendent would settle that matter for himself. A very satisfactory plan has been to have the teacher assign several topics relating to characters in the work read, the motive of the book, descriptions of scenery, etc., and have the pupils write an essay on whichever of the subjects they chose. This not only insures a careful reading of the book, but is also a good exercise in composition.

In making reading lists you must study the community. If you are in a college town, or one in which the inhabitants are largely well educated, in which a taste for literature is largely an inheritance, you can require reading of a character that you could not hope for in a manufacturing town in which the inhabitants are largely foreign-born, the children coming from homes where books are not known, and where the parents at best read only the daily newspapers, and in most cases not even them.

You must also consider what a community wants, or thinks it wants. If the parents care nothing about having their children acquire a taste for reading, you have them as well as the children to educate, and you must rely upon the press and the clergy, as well as the teachers, for help; and you must, for a time, be content to make progress slowly. If public sentiment is with you, as it ordinarily will be, all that is needed is good judgment; if it is against the work, or indifferent, you need to add to good judgment patience.

With a competent superintendent, ultimate success is absolutely certain. May I be pardoned if I close with a brief account of my own experience? I give this because it may encourage someone who feels that his opportunities are so meager that he cannot succeed. We began this work thirteen years ago in a most humble way. Our only library consisted of some four or five hundred articles taken from old magazines and pasted in cardboard covers. There was no public library in the place. It was not a reading community. There was not in it a dozen men with a college education. It is a manufacturing place. Nearly one-third of the population was Canadian French, a large part of whom were unable to read. More than one-half of the population was foreign-born. We began the formation of a school library buying in sets books in cheap bindings, Our work grew slowly. It met with some opposition. Our school library grew slowly, but the interest in the work increased rapidly. We were continually speaking of the need of a public library. One day I was greatly surprised to have a gentleman come to me and offer to start a public library for us and guarantee an annual income. The library did not make the reading course, but the reading course made the library. Today there is no work done in our schools more popular with pupils, teachers, and parents than that required by our reading course, and I am sure none more valuable. I give this bit of history because I think there are few places that would begin this work under more unfavorable circumstances than we did, and, as we succeeded, having no unusual skill, or experience, or wisdom to aid in the work, it would seem that it might be attempted almost anywhere with good hope of success. It may not be out of place for me to say here that my next report, which will be issued next fall, will give a full and detailed account of what we have accomplished, and that I shall be glad to mail a copy of it to anyone who cares to send me a postal card asking for it.

In closing, it seems to me that I cannot do better than to give the folling quotation from Henry Hudson: "What sort of reading are our schools planting an appetite for? Are they really doing anything to instruct and form the mental taste, so that the pupils on leaving them may be safely left to choose their reading for themselves? It is clear in evidence that they are far from educating the young to take pleasure in what is intellectually noble and sweet. The statistics of our public libraries show that some cause is working mightily to prepare them only for delight in what is both morally and intellectually mean and foul. It would not, indeed, be fair to charge our public schools with positively giving this preparation; but it is their business to forestall and prevent such a result. If along with the faculty of reading they cannot also impart some safeguards of taste and habit against such a result, will the system prove a success?"

DISCUSSION

L. D. HARVEY, Wisconsin.—In Milwaukee lists are made out by the principals and sent to the public library. The books are then sent to the school buildings for a certain length of time, charged to the principals, and are lent to teachers and pupils. Whenever a change is wanted, notice is sent to the public library. The same arrangement is made with the normal school. The books are kept from one to eight weeks.

J. H. VAN SICKLE, Colorado.— Has there been difficulty in getting books?

L. D. HARVEY.— Yes, because the demand increases so rapidly, tho books are added more frequently than formerly. The policy of the librarian is liberal, but the demand outruns the supply.

J. H. VAN SICKLE.— Is this extended to country places?

L. D. HARVEY.— No.

J. H. VAN SICKLE.— What is the plan in New York?

MISS MYRTILLA AVERY, New York.— Traveling libraries consisting of duplicates of books for class-room work and supplementary reading are lent to high schools. With these are often included lantern slides and pictures.

J. H. VAN SICKLE.— Is any definite work done by normal schools to create an interest in books and reading?

L. D. HARVEY.— I do not know in general, but in Milwaukee it is done. It was introduced because for twenty years I have been among the common schools and at every stage have found the difficulty to be that the teachers know nothing whatever about books. At one institute I found that not more than 10 per cent. of the teachers present had read a poem longer than one found in a reading book. In our state, schools are provided with libraries. A visitor once asked a teacher about the library. He said there was none The visitor then asked the district clerk, who also said there was none; but his wife said: "You are mistaken; it is in the bedroom under the bed." The teacher had not even enough energy to find out about the library. It is an important work to show teachers their needs and acquaint them with the provisions that have been made to satisfy those needs.

Much that has been accomplished in Milwaukee is due to one primary-school teacher, Miss L. E. Stearns, who spent her time and money in this cause. She had also that rare quality—"sand." When a boy came to her and said his mother didn't want him to read, she replied: "You take those books right home and read them; that is the work you are to do at home." Presently the same boy came and said: "Please, may I keep this book a little longer? My mother can't read English, but she likes to have me read this to her." If you can find a teacher like this, cultivate her. Give her every facility to carry on her work. This committee should encourage such efforts. You have a good list, but this will be ineffective unless there is a teacher who believes reading is a good thing. When librarians attempt to do this work alone, there is little success. Sometimes results are accomplished in spite of teachers, but that is rare. Most librarians are overcrowded with other work, while teachers are with their pupils six hours a day. They can exert a constant influence toward making reading a pleasure rather than a drudgery.

In Milwaukee we require pupils to know what is in the best standard books. We ask them to make lists and to say what they expect to find from them. In reading, when they do not like a book, we advise them not to read it, and we find some book they want to read. Sometimes this is a pretty poor book but we try to get them to read better ones next time. Perhaps we do not get systematic work, but we get reading and a love for good reading, and that is worth more than system. To begin with Henty and end with good books in history means intelligence, interest, and enthusiasm on the part of the teacher. I believe this is the most fruitful field in educational work today.

J. H. VAN SICKLE.— How does this react on the teachers?

L. D. HARVEY.— They come to understand what the pupil can appreciate and enjoy. It is a very practical form of child study.

MISS WOODARD, Michigan.— In our normal-school library of 20,000 volumes we have lists for all grades, and these books are in the library where students can consult them. The director of the training school has begun a card catalog, which is being carried on by seniors. In our school paper, also, we have printed information in regard to library progress. I should be glad to know if there are any normal librarians here who give instruction, and also what is to be done if the librarian has not time to give a course of lectures.

L. D. HARVEY.—In Milwaukee we undertake to make our students familiar with our books.

S. S. GREEN, Massachusetts.—The library school at Albany, N. Y., is working on all these problems. The vice-director, Mrs. S. C. Fairchild, is constantly on the lookout for points in this connection, either information or its sources.

SHERMAN WILLIAMS.—I wish some steps might be taken to interest teachers. The head of the school must be interested if a large and effective work is to be done. In New York there are not one hundred teachers who take a live interest.

S. S. GREEN.—The way to create interest is to get together the people who are interested. When I started this work at Worcester, I asked the principals of the high school and the normal school to meet me. Then the superintendent of schools called all the teachers together, and I found some teachers were already interested. Then the superintendent became interested, and after that the subject was discussed at teachers' meetings. It is important to incite an interest among those in authority.

F. A. HUTCHINS, Wisconsin.—Each state ought to have an enthusiastic man to go thruout the state and teach the teachers how to read.

RICHARD HARDY, Michigan.—After learning of Mr. Harvey's plan I undertook something similar in my school, and as a means of spreading the work I took advantage of the spirit of envy. We began to "brag," and we found it very effective. The papers got hold of it, and northern Michigan was soon interested.

J. H. VAN SICKLE.—Much can be done thru institutes, and widespread influence might be exerted thru the meeting of city superintendents.

DEPARTMENT OF EDUCATION OF THE DEAF, THE BLIND, AND THE FEEBLE-MINDED

SECRETARY'S MINUTES

The meetings of the department were held in the Franklin School building, a unique and interesting feature being the exhibits by the associate departments.

THE DEAF

The education of the deaf was represented by daily exercises in speech and gymnastics by a class of little pupils from Miss Garrett's school in Philadelphia; also by speech work by older pupils from the state school at Columbus, O.— J. W. Jones, superintendent.

The Arkansas and New Jersey State Schools for the Deaf made an exhibit of interesting kindergarten-occupation work by young children; the latter also had an exceptionally fine exhibit of art work by advanced pupils.

The Horace Mann School of Boston made an exhibit of stories for young children; printing and typesetting; drawing; card-board work, illustrating a three-years' course for pupils between the ages of eight and eleven years; wood work, illustrating a four-years' course for pupils aged from seven to seventeen years; needle work; cooking-class exhibit.— Miss Sarah Fuller, principal.

The McCowen Oral School for Young Deaf Children — the first permanent home kindergarten for the deaf — located at 6550 Yale avenue, Chicago, exhibited class-room work illustrating in sequence the value of drawing and work in materials, such as wood, tin, leather, paper, etc., as a means of expression for very young children in kindergartens and for primary grades of public schools, clearly showing the underlying principle and the correlation of material under varying circumstances and at different stages of thought development.— Miss Cornelia D. Bingham, in charge.

THE BLIND

The department for the blind was represented by an exhibit of the New York State School for the Blind, Batavia, N. Y., comprising kindergarten work, primary-grade work, script writing by the blind, typewriting class work by the blind, a sewing exhibit, and an American flag, made entirely by blind girls, the forty-five stars of which were sewed on by forty-five different pupils.— Gardner Fuller, superintendent.

The North Carolina State School for the Blind exhibited handwork by pupils.— John Ray, principal.

A loan exhibit of periodicals, books, music, maps, etc., for the blind, from the Congressional Library; a circulating library for the blind of the District of Columbia, and miscellaneous handiwork, exhibited under the auspices of the Aid Association for the Blind of the District of Columbia, which also conducted a series of morning concerts by the blind.— Mrs. John Russell Young, president.

THE FEEBLE-MINDED

The department for the feeble-minded was represented by an exhibit of the handiwork of pupils attending the Haddonfield, N. J., Training School for Mentally Backward Children.— Miss Margaret Bancroft, principal.

An exhibit of work and an entertainment by pupils of the Pennsylvania Training School for Feeble-minded Children, at Elwyn, Pa.—Dr. Martin W. Barr, chief physician, in charge.

FIRST SESSION.—Monday, July 11, 1898

The first session of the department was called to order in the auditorium of the Franklin School building, at 2:30 P. M., by the president, Dr. Joseph C. Gordon, of Jacksonville, Ill.

The president's address was followed by words of welcome by General John Eaton and Dr. Alexander Graham Bell, of Washington, D. C.

Mary Garrett, principal of the Home for the Training in Speech of Deaf Children before they are of School Age, Philadelphia, Pa., read a paper on "The Duty of the Hour to Young Deaf Children."

Superintendent Frank Hall of the Illinois State Institution for the Blind presented a paper on "Pedagogical Lessons from the Study of the Blind."

Dr. E. M. Gallaudet, president of the Columbian Institution for the Deaf, Washington, D. C., spoke on "The Advantages of College Education for the Deaf."

Isaac B. Gardner, of Little Rock, Ark., read a paper on "The Relation of the Deaf to the Hearing World."

The next paper on the program was by Margaret Bancroft, Haddonfield, N. J., on the subject of "The Trend in the Training of Backward and Mentally Deficient Children."

A paper on "The Relation of Language Teaching to Mental Development" was read by S. G. Davidson, Mt. Airy, Philadelphia, Pa.

The following committee on nominations was appointed:

Dr. Alexander Graham Bell, *Chairman.*
H. E. Dawes, Omaha, Neb., *Secretary.*
Hon. Robert C. Spencer, Milwaukee, Wis.
Mrs. Alice U. Hunt, District of Columbia.
Miss Thyrza Williams, Haddonfield, N. J.

SECOND SESSION.—Tuesday, July 12, 2:30 P. M.

Dr. Martin W. Barr, chief physician, Pennsylvania Training School for the Feeble-minded, Elwyn, Pa., read a paper on "The How, the Why, and the Wherefore of the Training of Feeble-minded Children."

An address on "Methods of Instruction" was given by Dr. Louis Klemm, specialist, United States Bureau of Education.

Dr. W. O. Krohn, physiologist of hospital, Illinois, explained "Physical Laboratory Methods," giving physical examinations and sense tests.

Dr. Elmer E. Gates, of the Laboratory of Psychology and Psychurgy, Chevy Chase, Md., presented a paper on the subject of "Brain Building and Mind Building with Special Reference to Sense Training of the Eye and Ear, and Teaching Mentally Deficient Children."

Professor Robert C. Spencer, president of the Phonological Institute, Milwaukee, Wis., gave a report of the "Day Schools for the Deaf of Wisconsin."

The Committee on Nominations submitted the following report:

For *President*—Dr. Joseph C. Gordon, superintendent of State School for the Deaf, Jacksonville, Ill.

For *Secretary and Treasurer* — Miss Mary McCowen, supervising principal of the Chicago public day schools for the deaf, Chicago, Ill.

For *Vice-Presidents:*

Vice-President for the Deaf—Mrs. Jennie Bright Holden, 626 Hayes street, San Francisco, Cal.

Vice-President for the Blind — Hon. Frank Hall, superintendent of State School for the Blind, Jacksonville, Ill.

Vice-President for the Feeble-minded—Dr. A. E. Osborne, superintendent of School for the Mentally Deficient, Glen Ellen, Cal.

The committee further recommended that these five officers constitute the executive committee of the department.

The report of the committee was adopted by a unanimous vote. On motion, the department adjourned.

MARY MCCOWEN,
Secretary.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

BY DR. JOSEPH C. GORDON, SUPERINTENDENT OF STATE INSTITUTION FOR THE DEAF, JACKSONVILLE, ILL.

I am well aware that you have not come to hear me make a speech in these days of action when our young men and our older men as well, are making history so fast. It is deeds, not words, that are wanted. I am very glad, however, to respond for a moment to the kind words of welcome, and, on behalf of all connected with Department Sixteen who have met here in the capital city of the nation, I now return our profound thanks to the committee of arrangements, of which Dr. Bell is chairman.

The time is too short to go into the history of the organization of this department. I will say, merely to put the matter on record, that the initiative came from the National Educational Association, at a meeting in Madison, Wis., in 1884. The matter was taken up there of joining hands with the educators of the deaf; and immediately after the meeting adjourned an invitation came from the officers of the National Educational Association for the teachers of the deaf to form a department; but nothing came of it at that time.

At the Buffalo meeting of the association a formal petition was presented (by whom I know not) asking for the organization of a department for the deaf. This petition was granted, but later was revoked, as an informality was found in it.

The following year the day-school teachers of Chicago and Wisconsin united in a petition asking for a round table in the interests of the deaf, in connection with the association at Milwaukee. This petition was properly indorsed by more than the requisite number of active members, and was readily granted. The round table was duly organized, and held a successful and enthusiastic meeting, which furnished a propitious opportunity for a renewal of the former petition in an acceptable form; and thus this branch of the great National Educational Association was formed, and arrangements entered upon which have culminated in this, the first formal meeting of this department of the association.

I can only say, speaking for myself, that it gives me the greatest happiness to have the honor to be the first president of this department. Many of my brethren have looked upon this movement with various feelings. For my part, I am ready and willing to join hands and keep step with every man and every woman on this broad earth who is working for God and humanity.

In planning this organization, it seems to have been laid out upon broad lines. It is, you may say, all-embracing, for it embraces the beginnings of all things. While it was primarily intended for the educators of the deaf, it soon came to include the educators of the blind, and afterward it took in those who are interested in the education of backward and feeble-minded children. It invites to attend the meetings of the department all who take an interest in the growth and progress of education for these classes. We feel that we are a part of the great educational army, and we feel that we are entitled to march along the same road, and that we must do so if we would keep up with the procession.

The difference between the education of the defective child and that of the university student, I take it, is not a difference in kind; it is simply a difference in degree. You take the same kind of step over the same track and pass thru the same processes, and no man can go thru a university successfully who has not taken precisely the same steps some time in his life that the backward and handicapped child must take.

I will only say that we who are engaged in these special lines have also been urgently invited to join our forces with the body of associated charities. Some looked with serious misgivings on that, but our friends who are connected with this organization state that they are the power behind the throne, that they are in control of the purse, and that the legislators all depend on what they say as to what the different schools in the states may receive. They tell us it is better for them to know something about us, something about our work, in order that they may sympathize with us and appreciate our work; and that they cannot for their lives see how our coming into their association can harm our work in any way. I agree with those who take this position. The educators of the deaf have a number of organizations peculiarly their own. They have the Association to Promote the Teaching of Speech, which has been very successful in its work, and a great many of the educators of the deaf are connected with that association. They wish us all to become connected with them, and I say Godspeed to their work; and I am glad, indeed, whenever any teacher of the deaf can see his way clear to work with that organization.

Then there is a newer organization as to form, but later in fact: the Convention of American Instructors of the Deaf, which holds conventions, when needed, every three or four years, as the case may be; and it has accomplished in the past, and is still accomplishing, a very great work. I feel that all this shows what a superabundant life and strength there is among us. And we are now also deeply interested in the great National Educational Association, which is the largest and greatest, and I believe the most efficient, educational association in existence.

THE DUTY OF THE HOUR TO YOUNG DEAF CHILDREN

BY MISS MARY S. GARRETT, PRINCIPAL OF THE HOME FOR THE TRAINING IN SPEECH OF DEAF CHILDREN BEFORE THEY ARE OF SCHOOL AGE, PHILADELPHIA, PA.

The duties of the present generation to the rising generation are being recognized and performed, to an extent that is most encouraging, in the general study of the individual child and in providing for it the opportunity for development of its individual powers.

Our deaf children have been more or less sharers of the improved opportunities, but the proportion of those who have had the chance for the best development of which they are capable has been distressingly small. The oral method for their instruction is gradually supplanting the sign method, so that out of about 520 schools in the world about 230 are oral schools. While the training of the children in and thru the medium of communication which is used in the world in which they must live is an advantage over a training in an arbitrary sign language which is not understood by others, they still have an additional handicap put upon them which hearing children do not suffer. With a very few exceptions, instead of their training in speech being commenced in babyhood, as ours was, it is delayed to the school age.

We have from a few mothers learned to realize the simple fact that, if deaf children are trained from infancy to look at the mouths and faces of people who are talking, and if they are further guided to imitate the speech they thus see, and if sufficient repetition of this is given them to make up for what hearing children get, unconsciously to themselves, by hearing every word spoken in their presence, they will talk and understand language from sight.

It would seem as tho nothing more were necessary than to tell the mothers and friends of every deaf child this, to induce them to do the same, but we find that two things must be accomplished before this work can be generally done at home:

1. All mothers must be made to realize that it *can* be done, and then they must be shown *how* to do it.

2. The public must realize that, instead of treating deaf children differently from other children, which makes them different, they must simply talk to them from infancy.

The most effectual way to do this has seemed to be to establish a home for deaf children with an environment which would secure to the children, as nearly as possible and under everyday home conditions, the same amount of repetition of the language thru the eye that hearing children get thru the ear while learning to talk. We have done this in Pennsylvania, and there is some of this early work being done in Chicago and Massachusetts, but very little elsewhere; but all of our work together is nothing to what needs to be done to give all deaf children as fair a chance as hearing children. As scarcely anyone who has not seen this work realizes what can be done, and as all thinking people, when they do see it, feel that it should be done for all, it seems reasonable to suppose that, if we should establish such homes simultaneously in all our states and territories, they would in the course of a generation so instruct the parents, friends, and the community as to what is possible for the children that afterward it would be done in their own homes as naturally as hearing children are taught, and special institutions for this class would no longer be needed. The deaf children who have no suitable homes would doubtless be provided for as our Children's Aid Society in Philadelphia provides for little waifs. It now has on its books 7,618 homes, all visited and certified to by its agents, in which little homeless children have been received and are well cared for. As there is only one deaf child in every fifteen hundred, the demand for homes for them could doubtless easily be supplied. This, then, seems to me the duty of the hour to little deaf children. With articulate speech, speech reading, and language, their happiness and independence may be said to be secure; without it they are more or less handicapped in every relation in life. If it is better for us to begin in infancy, it is better for them.

PEDAGOGICAL LESSONS FROM A STUDY OF THE BLIND

BY FRANK H. HALL, SUPERINTENDENT OF THE STATE INSTITUTION FOR THE BLIND, JACKSONVILLE, ILL.

The mind is approached thru the senses. The educator depends mainly upon three avenues of approach — sight, hearing, and touch. A psychologist tells us that the normal child obtains nine-tenths of his sense-perception thru the sense of sight. To teach a child to whom this avenue is closed, whose amount of sense-perception is thereby greatly reduced, is the task of every teacher of the blind. Careful observation of the results may possibly throw some light upon the general educational problem.

First, let it be observed that about 50 per cent. of the pupils in the schools for the blind have some sight. One-half of the remainder, or 25 per cent. of all, have had sight and readily recall images that originally came to them thru the visual organs. Of the 25 per cent. remaining who have no memory of sight, and therefore cannot recall visual images, many are mentally defective; the causes that operated to produce blindness having resulted in more or less serious mental disturbances.

The number of blind persons, then, who have never had visual images, and who are otherwise normal, and who are therefore suitable subjects for the proposed investigation, is exceedingly small — probably not greater than 15 per cent. of those who are found in the institutions, and not more than 5 per cent. of the blind people in any given community.

My proposition, then, is to examine with some care educative processes and results attained with that very small class of people who have never had visual images, and who are seemingly, in respect to natural mental endowments, the equals of ordinary children with sight.

First let us consider the educative processes employed with this class of pupils. Their education must begin, and, so far as sense-perception is concerned, end, in hearing and touch. They can come into possession of no images except tactile and auditory ones, and such as may be built up from these. This deprives them not only of all ideas of color, and of light and shade, but, what is vastly more important and interesting to the student of pedagogy, it deprives them of all instantaneous sense-perception *of large areas.* The normal pupil takes in at a glance a landscape. He afterward, by the analytical process, observes its parts, and their relations to each other and to the whole. The largest landscape that a blind person can grasp at one time, as a whole, thru the senses, does not exceed that which he can span with his outstretched arms. Oftener his sense-grasp includes only what comes under the palm of a hand, the tip of a finger, or the sole of a foot. His images of the most common objects, as a tree, a house, a garden, must be built up by the process of constructive conception, the material being the images of the very small objects that have come within his sense-grasp. The blind boy must obtain his image of a tree that he cannot climb somewhat as the boy with sight obtains an image of a place which he cannot visit. Each builds with images that have come to him thru sense-perception; the one builds with the large visual images of landscape, sky, and sea; the other must build with the minute tactile images of objects that have come into the palm of his hand, or under the finger tip, or into absolute contact with some part of the dermal surface. Not only must the blind child obtain his image of a tree or house in this manner, but his image of a foreign country, or of any country, must be built up of the same minute tactile images or of images that he has himself made from these. A moment's reflection will make it apparent that all the images of objects that come into the consciousness of the blind person, whether the objects themselves be near or remote, large or small, must be made up of small tactile images. The blind child is thus led to give more attention to detail than the seeing child. From necessity he exercises the power of constructive conception many times as often as does his seeing companion. Images of a thousand objects with which the seeing child is familiar without any constructive mental process can only come into the consciousness of the blind child by building them of such tactile images as are already in his possession.

Let it be supposed that the normal child of twelve years of age spends one-half of his wakeful hours in sense-perception and one-half in elaboration — in reproducing, in comparing, in thinking about that which he has perceived. Take away the sense of sight, and not more than one-third as much time will be spent in mere sense-perception. One-third of one-half is one-sixth. This leaves to the blind child five-sixths of his time for reproduction. The sense-perception of the normal child is to his elaboration, in respect to time, as 1 to 1; of the blind child as 1 to 5.

These two peculiarities in the educative processes of the blind, namely, the synthetic-analytic habit of thought, and the large amount of time given to a reproduction of sense-images, to comparison, and generalization, account for nearly all the almost marvelous achievements of some sightless students.

Blind pupils excel in mathematics. Why? Mathematics has to do mainly with comparison of quantities — mainly with comparison of *measured* quantities — mainly with comparison of *imaginative* measured quantities. The blind student easily creates images of the quantities to be compared. His synthetic habit of thought and his constant practice in imaging give him this power. He brings the terms of the comparison quickly into consciousness. The child with sight sees figures. Too often his images are images of digits. He fails to see the magnitudes or ratios which the figures should suggest. He attempts to see relation when the terms of the comparison are not in consciousness — only the symbols of the terms. The blind child has never seen these symbols, and makes little use of them even thru the sense of touch. He deals directly with number, and number suggests to him magnitude or ratio, or both. Suggested magnitudes he can create; suggested relations he can apprehend, because the images of the things related are in consciousness.

Blind children excel in geography. Why? Because they have learned to use the imaginative faculty. They see places only a few feet distant, thru the mind's eye. The task of seeing places a few miles away, or even a few hundred miles away, is scarcely greater. They have built their image of the town in which they live, with its trees, its gardens, its dwelling houses, and its public buildings, mainly by the exercise of the power of constructive conception. They can build a London, or a Paris, or a Moscow in the same manner. The child with sight sees the town in which he lives, but he cannot see London. He fails to see with the mind's eye the villages and cities, and rivers and mountains, which these symbols should suggest. The blind child has never seen these symbols, and those which he uses are sufficiently unattractive and difficult of manipulation to guard against the danger of substituting in the mind of the pupil the symbol for the thing symbolized.

Blind students are, for the most part, good readers and good listeners. Both of these processes, it will be observed, are synthetic, and are therefore quite in harmony with the operation of the two educative senses which the blind exercise. The amount that a blind student reads is, of course, comparatively small; but the amount retained is comparatively large, while his digestion and assimilation of what he reads or hears are more complete than those of the seeing child.

But blind people do not excel in all branches of study. In mathematics, history, and literature, if the means are at hand for providing skilled teachers and the necessary books and appliances, blindness seems scarcely a barrier to progress. The compensations almost, if not quite, equal the deprivations. In natural sciences the blind pupil is seriously handicapped. True, his memory of words may enable him to "pass" even in the science studies, if the tests are such as were usually made in the schools twenty years ago; but he can at best do little in the laboratory; and his knowledge must be lacking for the most part that sense-basis which is necessary to make it of real value. He may acquire a knowledge of scientific terms, and know something of their correct use; but as to training for power by means of scientific observation and comparison, blindness presents an almost impassable barrier.

A main weakness of the blind is the result of the narrow sense-basis upon which they must build. This is also a main source of their strength. They are narrower in their intellectual acquirements, but deeper and higher, than their seeing companions. Their profundity, however, has been gained at the expense of breadth. They have fewer sense concepts, but these are more perfectly elaborated; and they seem entirely sufficient for remarkable success along certain lines of purely intellectual effort.

There is a danger in "eye-mindedness" that is the counterpart of the main difficulty in blindness. For the blind a most vigorous effort should be made to increase the amount of sense-perception. For the seeing the main source of danger is that in these days of "laboratory methods" and "nature study" mere sense-perception will occupy the time of the pupil to such an extent that comparison, classification, generalization, and reflection will not receive a due share of mental effort.

Neither is blindness favorable to that kind of intellectual and physical development which prepares for usefulness in society. The education of the blind, if allowed to proceed along the lines of least resistance, has reference mainly to the psychological factor in education. The sociological element is almost wholly wanting. The blind child learns that he may be learned. He desires to know that he may possess knowledge. He wants intellectual training for the delight there is in it to himself. He wants music for the sake of music, and the satisfaction which it brings to him. There is pleasure in mental development, in growth; and this pleasure he seeks where it can be most easily obtained. He wants mental power without any idea of the use to which this power is to be put. And the great human heart says, Let the poor blind child have all the pleasure he can get; and institutions are provided and generously equipped in which the young blind are segregated and trained along physiological and psychological lines, until they almost forget that there is any world outside of a school for the blind, or any duties to perform except such as have a direct bearing upon their own mental and physical development. The weakness of the blind is not chiefly psychical, it is not chiefly physical. It is their inability to use their powers in the proper performance of social duties. It is in the great difficulty they find in adapting themselves to their social environment after they leave the school and take their place in society. It is in the great difficulty they find in contributing their share to the well-being of the race, or to that portion of the race that forms a part of their environment. In this respect they are not altogether unlike many of the pupils from the common schools. In the case of blind people this defect in their education and in their capacity is fearfully emphasized. In school they are segregated — separated from those with good sight, from such as those with whom they must associate in after-life. The necessities and some of the luxuries of life are provided for them at the public expense. Three-fourths of their time for eight or twelve years they are in an atmosphere utterly unlike that into which they will be thrust at maturity. After leaving school, unless the family wealth is sufficient to provide for their wants, they are confronted with a problem utterly different from any they have found in the books. In some instances their education has unfitted them for the solution of this life problem. Many pupils — some of them blind, and some of them with two good eyes — learn to measure the value of every exercise by what it will directly contribute to their personal comfort — physical, intellectual, spiritual. The idea that their own ultimate happiness and genuine prosperity must come from what they can contribute to community life has no place in their thought.

The state recognizes the fact that the feeble-minded will be unable to take their places in society and contribute to the community as much as will procure, in return for their services, the necessities of life. Hence asylums are provided in which they may spend their days, and perhaps pay in part for what they receive.

The deaf are but slightly handicapped in their productive power. The state educates them, providing in many instances instruction in a trade, and sends them out equipped for service.

The blind, with capabilities for intellectual development slightly impaired, with powers of mind that are sometimes akin to the marvelous, capable of intellectual enjoyments of the highest order, are most sadly handicapped in their attempts to perform useful service. No asylums for them are provided (unless the industrial homes be so regarded, and the number of these that are successfully managed is small). They are segregated for years and then sent back to their homes, or sent out into the world to make a home in darkness for themselves.

I repeat, the teachers of the blind have the most difficult task of all—properly to co-ordinate the psychological and the sociological factors in education, and this task is rendered doubly difficult by the artificial environment which their segregation produces.

And yet there is but one test for all. The value of any educational process must be measured in units of service, and precisely the same measure that determines its value to the community determines its value to those who receive its benefits.

In the words of Ruskin: "The human race is a divine family, the ideal of which is that each shall work for the good of all and precisely in so doing secure for himself the greatest good."

In this divine family there are no exceptions to this general rule. The rich and the poor; the bond and the free; the deaf, the blind, and the feeble-minded, can all secure for themselves the greatest good by working for the good of all; and that educator, or that group of educators, or that educational system, or that educational institution, that shall in a high degree promote the service power of those to whom instruction is given cannot fail to be working on right lines, for their efforts are in accord with a divine law as certain in operation as the law of gravitation itself, and as beneficent in results as that of Christian charity.

THE RELATION OF THE DEAF TO THE HEARING WORLD

BY ISAAC GARDNER, LITTLE ROCK, ARK.

In the study of history we examine the records of past experience so that we may be able to foresee and provide for the experiences which are to come. The final chapter in the history of the human race is already begun, and each of us may turn to that history and read there the story of his own life, for the history of the individual is in every respect analogous to the history of the race. It is due, in great measure, to education, that the deaf of today are able to contribute their share to the making of history. Years ago, when the condition and welfare of the deaf first began to arrest the attention of thinking men, it was considered impossible for those deprived of the sense of hearing to be formally educated, because it was believed that no medium of communication could be established, and, furthermore, that the deaf were intellectually incapable of receiving such an education. But time and experiment have overcome this puritanical prejudice and proven the fallacy of both these premises. The deaf man is not less rational or impressionable because of his deafness. In being shut off from the influence of sound he merely suffers an inconvenience. His sense impressions are not less acute, nor his intellect less strong; his conscious experience is not less perfect, nor its influence less potent.

Thus it has been discovered that education may do for the deaf precisely what it may do for the hearing. The deaf child, being of the same constitutional nature, and inheriting all the attributes of that nature, is educated by the same method, subject to the same training, and masters the same course of study by which his hearing brother is educated. The number of sense impressions received within a given period of time is, of course, somewhat diminished, but in the matter of mental development this is the only point of departure from the normally conditioned child. To increase the intellectual activity by supplying the deficiency in sense impressions occasioned by loss of hearing constitutes the special profession of the instructor of the deaf.

THE TREND IN THE TRAINING OF BACKWARD AND MENTALLY DEFICIENT CHILDREN

BY MISS MARGARET BANCROFT, PRINCIPAL OF THE HADDONFIELD, N. J., TRAINING SCHOOL FOR MENTALLY BACKWARD CHILDREN

Ever an increasing interest is manifest in the "what to do" and the "how to do it" for those who are mentally, morally, or physically deficient; so that even the mite which I can add to the general collection may assist in the building up of those future edifices for the care and training of weaker humanity. It is our hope that a few facts impressed from time to time may spur on these thinking women and men of the National Educational Association to aid in uncovering the minds which have been hidden, and the morals overgrown with weeds, even as the sculptor uncovers the statue when he has wrought his best.

Before entering upon the details of training the mentally deficient, there are two essential questions to be settled, namely, the size and character of the state schools, and the necessity for a change in the nomenclature from idiot and imbecile to one which will demand respect from all.

One of our great scientists says: "Science is organized common sense." Can any intelligent human being see or feel that there is organized common sense in bringing together under the care of a single institution hundreds of human beings afflicted in a physical sense to such a degree as to cause mental deficiency? Think of it, you who are students of physiology, and predict the results! Think of it, you who are interested in the study of psychology, and interpret the loss of mentality to those who, if surrounded by the proper environment, might reach a higher standard! Think of it, you who are earnest students of biology: is this the way you treat the specimens which you wish to preserve and improve?

The thoughtful must feel that little is as yet known of what may be done for this class of unfortunates, requiring, as they do, more tact, more personal care, and more scientific teaching than the deaf or blind, yet receiving less than any other class of defectives.

In 1850, in the United States, the mentally deficient aggregated 9,830; in 1890 the increase was to the number of 97,097. The last eight years the number is increasing more rapidly. Dr. Fernald estimates an average of one mentally deficient person in every 500 inhabitants in the United States. In the year 1898 there were twenty-four state schools, with 8,492 inmates.

In our opinion, schools should be established thruout the different states, with a capacity not exceeding one hundred in number and arranged on the cottage plan. Each cottage should have a family of twenty-five, graded according to the mental advancement, placing in each family of higher grade two of lower grade, so that the pupils of lower grade would imbibe some of the mentality of the higher order. This would give the matron an opportunity of judging what help and care are required by those of the lower grade.

The assembling together of all of a low grade is very detrimental, as many children might, from some disfigurement or physical cause, appear more deficient than they really are; and at first sight this general plan would seem to involve a very large expenditure, but this would be more than offset by the advantages which would accrue from the practical and scientific management of this class. In each of these small state homes there should be a schoolhouse, equipped as thoroly as for normal children. Physical-culture and manual-training departments should be fitted with the best apparatus and tools. There should be not less than six good teachers for this number, each thoroly qualified in her special branch.

The physical care should be given over to none but first-class practitioners. No resident physician is able to acquire sufficient experience materially to benefit the mentally deficient or insane. An outside physician coming in daily contact with different diseases in private practice, and in the hospital clinic, is the one to care for these who are afflicted in a thousand different ways. That outside physician would bring new thought, new impetus, and new interests, which would result in maintaining a higher standard in the homes. Physicians of all schools should have equal opportunities in the treatment of these cases; conditions which one school might overlook another might remedy.

It would be well for this society to formulate and urge the passage of state laws providing that every mentally deficient boy (whose mental deficiency is positively proven by three competent physicians) be castrated before the age of puberty. Such a procedure, regulated by law, is a humane measure to prevent the perpetuation of his kind.

These children should be trained in both physical and mental work, thus utilizing the physiological fact that systematic stimulation is as necessary for development as is a supply of blood to the nerve centers. Sight and sound are the more common stimuli to movement. A methodical brain training, utilizing and also providing for the appropriate exercise, in rotation, of all the brain cells responding to the senses, will, if carried out by earnest teachers of strong mentality, produce good results.

In physical culture the work should be done with the feeling that a muscle duly supplied with good blood and properly stimulated to action will grow. The nerve centers of the brain which stimulate the muscles are brought into simultaneous activity, and tend, on future occasion, to act with more exactness and promptitude when stimulated by repetition of command. Much depends, however, on the selection of teachers with strong and adaptive individuality, who are able and sufficiently interested to become for the time the mind, so to speak, of the charges under their tuition, and thus stimulate mentality by a sort of induction.

As the work demands so much in the way of mental resource, a successful teacher in this work, as in the training of normal children, is compelled to grow. The second important matter in connection with the advancement of this class of children is the absolute and universal change of the name from that which is neither technical nor dignified. I allude to the terms "idiot" and "imbecile." Dr. Ireland tells us that the terms are not descriptive; and, furthermore, that it is difficult to frame a terminology comprehensive enough to include all the meanings in which they have been used. We agree with Dr. Ireland, and feel that, until less objectionable terms can be applied to these conditions, the generic title "mental deficiency" is not only free from the stigma of reproach, but is also descriptive of the condition.

The ideal teacher for this work must possess inborn tact, as well as a good working knowledge of psychology and physiology. No second-rate teacher should ever be placed in charge of such children. Another problem that has been so far unsolved presents itself. What is the best training for the morally deficient? There should be small home schools where the children of this class can remain under the most judicious training from earliest childhood until past twenty-one. Houses of refuge and other so-called reformatories are not the proper places for these children. They should have homes, and these homes should be under the care of the most expert psychologists, and the best physicians should be in daily attendance to note the individual results of management.

In the management of the morally deficient there should be no hesitation about the unsexing of both male and female, where it has been proven beyond doubt that the case is incurable, as in the case of the hopelessly insane or mentally deficient.

We should meet the question bravely and with "organized common sense," and altho the problem is not solved; for as long as we are imperfect we shall have moral lack; yet the unsexing of those unfitted to take up the duties of life, together with the lines of management previously suggested, will go a long way toward the practical solution of this important question.

THE RELATION OF LANGUAGE TEACHING TO MENTAL DEVELOPMENT

BY S. G. DAVIDSON, MT. AIRY, PHILADELPHIA, PA.

[AN ABSTRACT]

The paucity of mental development and the inability of the deaf to express themselves with ease and correctness in spoken or written English, which we discover in so many of the pupils in the advanced classes of our schools for the deaf and in our graduates, are due, in a great measure, to our failure to recognize in the work of the primary and intermediate grades the close relation existing between thought and language, and between the processes for the development of the one and the teaching of the other.

While we think and speak of language as the expression of thought, in educational practice we too frequently treat the two as if they were things apart, endeavoring to give thought independent of English modes of expression and drilling on language forms without much regard to the thought content of the word or sentence. Moreover, we are quite liable to overlook the less obvious, but equally, if not more, important, office of language as a stimulus to the intellect and an instrument for its development. We do not, as we should, determine the matter and method of instruction in language by the mental states of the pupil, nor consider the influence of the work we are doing, and the way of doing it, upon the future mental states. Neither do we commonly recognize the importance of so cultivating the faculties as to make future progress in language possible and easy. To state the matter broadly and briefly, our work lacks the psychological basis that alone can make it progressive and enduring in its results.

This is primarily due to the fact that few of our teachers are students of psychology, and particularly of the new psychology, which, by its bearing on educational principles, is revolutionizing methods of instruction in the common schools.

It is not proposed here to discuss the theoretical aspect of the relation of language to mental development, but to speak of the practical application in the teaching of the deaf of a few of the principles that have been generally accepted by psychologists and educators.

Language of some kind is necessary as a stimulus to the mind, as a means of directing the attention, recalling past perceptions, and affording a means of comparison and reasoning, so that with the very young deaf child signs have an apparent advantage over speech and writing, in that they are so much easier to learn, and put him at once into communication with other children and with his teacher. But this advantage is many times counterbalanced by the effect of the use of signs upon the child's character, his present and future improvement in spoken and written language, and the ultimate development of the faculties. Psychologists are agreed that a man's thoughts and feelings are unconsciously molded by his vernacular, the language which he uses from childhood, and in which he spontaneously expresses himself.

Hence we are irresistibly impelled to the conclusion that to make signs the vernacular of the deaf child must result in his becoming, not an Englishman, a German, a Frenchman, or a member of any other nationality. but, intellectually, a man without a country. In other words, we find in the sign language a psychological basis for the conditions that are sometimes referred to under the term "the deaf-mute mind."

How, then, can he be expected to attend to — make an effort to master — that which seems to him superfluous? Let us ask ourselves the question: If a child does not master the English language, what will be the effect on his future development?

By all authorities on education, attention is considered the first necessity. In the absence of a trained attention, any great development of the other faculties or acquisition of knowledge is impossible, and this is the great lack thru all the grades of many schools for the deaf. It must be cultivated in the lowest grades, and it cannot be done by making language, which is here practically the only thing taught, a mere form study.

It is therefore necessary, while not neglecting the drill on forms which will rapidly habituate the pupil to correct expression, to devote much time to the presentation of thought that will interest and so excite the attention. Object and nature study are best calculated, not only to accomplish this end, but to exercise the other primary intellectual faculties, and so prepare the way for the development of the higher activities. It is also the thought study that most satisfactorily accommodates itself to the language necessary at different periods.

In closing the line of thought, Mr. Davidson gave the following quotation:

"Words have no authority and no office if we divide them from things, nor can things have the light thrown on them by which the mind distinguishes, orders, and groups them, and acquires the power to recall them, if they are detached and set apart from words."

THE HOW, THE WHY, AND THE WHEREFORE OF THE TRAINING OF FEEBLE-MINDED CHILDREN

BY MARTIN W. BARR, M.D., CHIEF PHYSICIAN OF THE PENNSYLVANIA TRAINING SCHOOL FOR FEEBLE-MINDED CHILDREN, ELWYN, PA.

"It is better that every kind of work honestly undertaken and discharged should speak for itself rather than be spoken for."

This sentiment of Charles Dickens is certainly that which animated the members of your committee when they requested a practical object-lesson in the training of all classes of defectives. While thanking them on the part of our branch of the work for their cordial invitation, I may add the hope that the wisdom of their arrangement may be emulated by all organizations desiring information on a subject which mere language fails to elucidate. Thus, and thus only, and by repeated exposition, can the public be brought to estimate rightly the tremendous importance of this work, or, in fact, to understand at all the how, the why, and the wherefore of the training of mental defectives.

Our first topic, which, I trust, our boys have clearly demonstrated, and which is further illustrated by their exhibit, is briefly explained in the motto of their little paper: "The working hand makes strong the working brain." You will see there also that in our scheme of development the three H's have superseded the time-worn three R's.

Recognizing that the sense of touch is the most sensitive, as well as the most reactive, of all the senses, we utilize it as the master-key which shall set free the powers of the head, the hand, the heart. The axiom that the will is best stimulated by and thru the emotions is daily verified in dealing with natures absolutely sluggish and indolent, intensely perverse and obstinate, or unduly nervous and excitable. This stimulus, to be healthful, must be natural, and what more natural to a child, from the days of traditional mud pies up, than the love of making something — unless it be the love of tearing up; and even that has long since been recognized as due to a spirit of investigation, and therefore to be *constructive* rather than *destructive*. Indeed, we must take the child as he is, without attempting to make him over again. Direct the destructive activities into constructive channels — make the stream turn the wheel, and it will not sweep away the mill.

This little ball in my hand I consider the most valuable thing in my exhibit. The boy who made this was next to the lowest grade of mentality. His hand against every man, he fancied every man's against him; always under close custodial care that he might harm neither himself nor others, he would vent his spleen in tearing his clothing. His teacher, a woman of rare patience and devotedness, one day sat beside him tearing strips of old linen and laying them in order. "See, Willie, let us make some pretty strips and lay them so." His wonder grew at seeing her doing what he had been reproved for doing, and at once there was a bond of sympathy. She was playing his game — the only one, poor little fellow, that he was capable of — and he joined in. "Now we will draw out the pretty threads and lay them in rows." For weeks the child found quite a pastime in this occupation, and the violent nature grew quieter in proportion. One day the teacher said: "Let us tie these threads together and make a long string." It took him months to learn to tie those knots, but meanwhile his attendants were having breathing space. "Now we will wind this into a pretty ball, and I will cover all you make for the boys to play with;" and a new occupation was added to his list. The next link in this curious chain of development was a lesson in knitting. Thru months of patient teaching it was at last accomplished, and the boy to the day of his death found his life happiness in knitting caps for the children, in place of tearing both them and their clothes. You see she was wise enough to utilize the natural activities of the child and direct evil propensities into a healthful channel. Had she brought knitting and bright yarn or anything foreign to him first, it would have been truly putting "new wine into old bottles." His obstinacy would have been aroused, and he would have torn clothing to the end of the chapter. Now, just what this shows is to be found in varying results thru all the grades that have been presented to you today — and just here a word on the subject of grades, so little understood by the general public. Mental defectives, broadly considered, are divided into two classes: the imbecile, trainable; the idiot, untrainable. Between the two, the idio-imbecile, the direction of whose feeble powers, so far as to aid in the care of himself and of his weaker brother, can hardly be dignified by the term training.

Of these two latter it is not my purpose to speak just now, altho they are found in large proportion in the custodial departments of all training schools of this country, but not in England nor on the continent. It is the imbecile or trainable class which is here presented to you, in the four different grades which experience has dictated and proven. You are not to confound these grades of mentality with school grades in the common acceptation of promotion in studies; on the contrary, between mental deficiencies there is a distinct line beyond which there is rarely an individual case of advance, tho there may be, and often is, retrogression.

First you have the low-grade who can never learn to read or write — trainable only in the simplest acts of house or farm service, who can know nothing beyond a life of drudgery, but will, on the whole, be content therein. This grade generally presents two types: one, good, docile, obedient, having little or no will power. Such a one out in the world becomes the ready tool or victim of the designing or the vicious, and thus innocently helps to fill our prison wards. The other, obstinate, perverse, and indolent, needs always a strong hand to keep him at constant occupation, which is all that preserves him from a lapse into idiocy. He would be the tyrant of a household — the terror of a community.

The middle-grade, trainable in varied degree in the useful and mechanical arts, may or may not, as an aid in his development, be brought to read and write, but will never use the knowledge practically in his work as a good servant or a fairly good mechanic.

The high-grade, capable, in intellectual capacity, of advance as far as the first intermediate, can never, without danger of breakdown, attempt all the studies of that course. His life work must, therefore, be sought in the various trades and handicrafts to which his development, by means of manual training from the kindergarten up, has always been directed, and life happiness, possibly as a skilled artisan, for him be assured.

Lastly, the moral imbecile — found in all three grades, often abnormally bright — may vary intellectually from a brute to a genius, but the moral sense is absolutely wanting. It is from this class that the criminal ranks in all lands are largely recruited. His permanent sequestration under close custodial care, with as many ameliorations as possible, is absolutely essential to the safety of himself and of society.

In hearing *how* we strive to arouse dormant faculties, and that manual training is not only the basis, but the means and the end, in all our efforts, you have probably already arrived at some of the many reasons *why*.

First: *Safety for the individual.* In dealing with mental weakness, either congenital or accidental, there is always danger, under pressure, of outbreak into insanity or a lapse into idiocy. We must stimulate and arouse the sluggish nature while we guide and restrain the excitable. Now, in the wide field of varied occupations, manual training offers a great advantage over the purely intellectual — an advantage incalculable to us, forced as we are to consider not only the different grades of mentality, but the peculiarities and proclivities of individuals in each grade. Not only does it afford great selection for the child, but opportunity for observation and immediate change according to needs. A diagnosis of intellectual processes under the excitement of class competition is not so easy, and the remedy, therefore, not infrequently comes too late.

Second: *The happiness of the individual* is next to be considered; and all true happiness must have its root in self-respect. We are dealing with a race that has too long been despised and rejected, and science, by indicating many hitherto unrecognized, is adding a host bright enough to be extremely sensitive and unhappy under such conditions. To avoid pauperizing and to stimulate self-respect, we must offer some avenue for gaining the respect and appreciation of others. This is best done by uplifting and maintaining the dignity of labor, and this for all grades. Even the lowest is made to feel: "Who sweeps a room as to Thy law makes that and the action fine."

"Study to show thyself a workman approved," must be our charge to the many, if each is to realize, "Not what I have but what I do is my kingdom." This, moreover, for the moral imbecile who, in close custodial care, must find his only safety in congenial employment, if we would avoid that blot upon nineteenth-century civilization — the record of the unoccupied in prison cells.

The social qualities so often dwarfed in the narrowness of class competition expand freely in this natural atmosphere, where honest work well done is made the true gauge of character. The moral effect of the daily use of the try-square cannot be overestimated. Egotism, that bane of the imbecile, finds in it a constant check, while altruism is best fostered in the workroom where each is called to admire and consider "not his own but another's good." Furthermore, when the child in the kindergarten, the girl or boy in the workshop, has faithfully modeled, improved, or originated any one thing worthy to be offered as a gift, these children, who can know nothing of the value of money, have yet within their grasp that without which the rich man with all his possessions would be poor indeed — the power and the right of giving.

We aim, indeed, to make this the dominating spirit; even the acquirements of reading and writing are made tools to this end; those who can learn being encouraged to entertain and assist those who cannot. Music and drawing alike are not to be regarded as mere accomplishments of the individual, but all must minister to the common good.

And wherefore all this for imbeciles? Is it worth it? many may ask.

Between that question and the answer lie a hundred years of experience, and the working out of scientists and philosophers of a basis for the coming century to build upon.

Work among the mental defectives, having its birth with the nineteenth century, has grown with it. Enriched by its thought and discoveries, and adapting itself to its ever-increasing demands, it has so modified until its character and aims are alike changed.

What, in the beginning, was a philanthropic purpose pure and simple, having for its object the most needy, and therefore naturally directed toward paupers and idiots, now assumes the proportions of a socialistic reform as a matter of self-preservation, a necessity to preserve the nation from the encroachments of imbecility, of crime, and of all the fateful heredities of a highly nervous age.

The enthusiasm of Itard, in 1800, to reclaim the wild boy of Aveyron which inspired the efforts of his pupil Seguin in his wonderful work at Bicêtre was a noble preparation, but still, as Seguin himself admits, was only experimental until "Haller, Boerhaave and Morgagni had brought physiology to its rightful place at the head of the medical sciences," and Rousseau, Pereira, and others had demonstrated its application to education. Then the closing decade of our first half century witnessed a simultaneous movement in England, America, and on the continent in the establishment of institutions for the training of mental defectives. The work was good of its kind, and we have not improved upon it, nor can we, for it was expended chiefly upon the class which, as I have told you, is largely unimprovable. It was embarrassed, and is greatly so today, by the idea, eagerly embraced by the ignorant, of *cure.*

I wish it were only possible to convince some of the heart-broken mothers that for congenital mental weakness there is no cure. One may as well talk of curing a child born without an arm as restoring a defective brain. We cannot *re*place that which never was placed.

Science again points the way, and having before repeated new principles as bases of practice, she now designates new cases to be treated. Medical science in all its branches, educators from kindergarten to university, have, during the last half century, studied man. Viewing this investigation, culminating as it has in this wave of child study, one might say that anthropology and sociology had led all in one common bond to the cradle to note there the influence of nervous environment and unfortunate heredity.

This simultaneous investigation and comparison of views has caused rapid modification of thought, judgment, and consequent action, already materially affecting individuals and society. In law, in medicine, in education we find signs of less dogmatism and severe condemnation, more time given to observation, and greater desire to assist rather than to force nature. Criminology shows the criminal the irresponsible victim of ill, rather than its deliberate author. As alienists and neurologists constantly note and report new examples of nerve disorder, society begins to recoil from the evils of imprudent marriage connection and from a high-pressure system of life and education "falsely so-called."

Thus the signs of the times are full of hope — hope which shows endless possibilities for teachers and guardians for a dominant and dominating race. It means success and victory all along educational lines, if untrammeled by defectives, but defeat which will lead to tedious and endless readjustments, if teachers are forced to continue the impossible task of dragging normal and abnormal up to one common standard.

Think of it! One hundred thousand of the feeble-minded children in the United States alone, constantly increasing by birth and immigration, and not one-tenth provided for in institutions! The rest crowd our schools, walk our streets, and fill alike jails and positions of trust, reproducing their kind and vitiating the moral atmosphere.

Science and experience have searched some of them out and classified them, but hundreds of their brethren are desolating homes, paralyzing the energies of normal people, or suffer in prison cells the innocent perpetrators, not of crime, but of motiveless acts.

To nations and races as to households and individuals must come a clearing-out time, and it has come to us. There must be a sifting out, and "each must go to his own place," if we are to clear the way for twentieth-century progress; and therein lies the *wherefore* of our work. We are already preparing to receive the element which your backward classes of feebly gifted children and your truant schools will eventually bring to us, and we are doing it by means, not of mere trade schools — that will come later — but of an all-around system of development thru manual training. We must take what you sift out, but, in order to do this, we, too, must have our clearing out, for we shall need space and yet more space. With our untrainable population — the idiots and idio-imbeciles — cared for in institutions suited to their needs, and with relief from the odium of their presence as well as their care, the better class will drift more readily from you to us, and thus we shall be enabled to extend our legitimate work of training to embrace the trade schools, which shall give life-long occupation to these children that sit in darkness and shadow. Not only must we be able to relieve you, and to press forward ourselves, but soon we, too, shall need relief from overcrowded conditions.

Having trained, what shall we do with, the imbecile? is the question for you who send, for us who receive, to ponder; a question fittingly addressed to a national assembly, for it is one to be gravely considered by the whole nation, of national importance, and requiring national legislation and provision.

Shall we turn this irresponsible loose to undo the work of the past and redouble that of future? Surely, if this be done, history will not write our names among the wise. Experience, and indeed every consideration for the individual and for society, points to the absolute necessity of permanent sequestration, and this, too, coupled with every means that science, under wise legislation, may dictate to stem the torrent of inherited ill, and to forbid the increase of this pernicious element — measures which, freeing the unfortunate from the bondage of passion as well as of a keeper, would permit greater freedom of intercourse between members of a community. The colony idea now working itself out will shortly give sufficient data upon which to form an opinion, and, if successful, will doubtless give a practical solution to this problem.

I do believe that, under wise direction and national provision, such a colony might be made almost self-supporting, and also, by giving definite aim, be an encouragement to the work in the various training schools; and it does seem to me that these settlements of simple, childless folk scattered up and down thruout the land — these victims of the follies and vices of the past, who must themselves, in a certain sense, always be children, finding their happiness in congenial occupations and quiet pleasures — would in time have an influence for good greater and more far-reaching, because more subtle, than the frown of penitentiary walls. Protected from the world, and the world from them, these children of the nation, instead of, as now, its standing peril, would be a continual object-lesson — at once a reproof and a warning to guide us to "that statelier Eden of simpler manners, purer laws," which the twentieth century shall usher in.

BRAIN BUILDING AND MIND BUILDING, WITH SPECIAL REFERENCE TO SENSE-TRAINING OF THE EYE AND EAR, AND TEACHING MENTALLY DEFECTIVE CHILDREN

BY PROFESSOR ELMER GATES, OF THE ELMER GATES LABORATORY, CHEVY CHASE, MD.

[ABSTRACT]

Certain experiments in physiological psychology prove that the training of any one sense develops the sensitiveness of all of the other senses. The experiments of Urbanschitz proved that certain sounds can be more distinctly heard when the auditor is at the same time looking at certain colors, and *vice versa.* He showed that certain colors could be seen at a greater distance when the spectator was simultaneously hearing certain sounds. The power to exercise voluntary attention is a product of civilization and training. Savage races have only spontaneous attention, and they are easily distracted. One of the results of modern education is the production in the pupil of the power to will his attention to a specific theme or object. I think this point has philosophic significance, namely, that the training of any one sense is able to develop not merely that special sense, but the general power of the whole mind. The application of this series of facts to the training of the mentally deficient, and to the training of the deaf and blind, is very obvious. If the eyesight is very weak and defective, there is sometimes more to be gained by first training some other sense than the eyesight, and most especially by training all of the other senses. I am particularly desirous fully to emphasize this point. I have an electrically propelled tuning-fork which for a period of a half hour gives a continuous amplitude of sound, and by carefully regulating the current by means of a voltmeter and ammeter a great sensitiveness and practically uniform loudness can be obtained. With this instrument I made several series of tests. When I began, the remotest distance at which I could hear this particular fork was 206 feet. I did this during the stillness of the night, and at a time when no other sounds of that character were audible. I followed this with three hours of daily training of touch, temperature, hearing, and taste for five days. At the end of that time I could hear the fork when at a distance of 286 feet. I repeated this experiment upon two of my assistants, with similar results. I have a friend, sixty-eight years of age, who for five years had not been able to distinguish the difference between green and red. After careful tests I was fully satisfied that he could not tell the difference. Nine days' training of the temperature sense and of smell enabled him to distinguish the difference between the tints of red and green when the difference was only 8 per cent., and between all of the pitches of red and green when the luminosities were only ten. I think these experiments have a direct bearing upon the whole question of training the deaf and the mentally deficient.

THE SENSE STAGE OF MIND BUILDING

The next point which I wish to make is that in the training of any sense every typical discriminable sensation should be at least four times recognized by the pupil, so as to produce permanent structural changes in the brain, which changes constitute the memory enregistrations of that sensation experience. Many of you here will recall an account of my brain-building experiments upon dogs given in 1894 before the Geological and Anthropological Societies of Washington. These experiments have since then been in several ways corroborated. Thus Professor Aurelio Lui, in Stephano's laboratory in Italy, made experiments upon lower animals, from which he concluded that as animals more and more acquire facility in locomotion they get a correspondingly larger number of cells in the motor regions of the brain, and that these cells acquire more dendrites, filaments, and other structures. This is in corroboration of statements which I made a number of years before Lui's experiments. The general conclusion from these experiments was that every conscious mental experience causes, by its functional activity, in some definite part of the brain, a series of distinct structural and chemical changes, and that the refunctioning of these structures is essential to the remembrance of that experience.

At present I need not dwell upon the methods that prove that mental functioning produces brain structures. Huxley, long ago, called attention to the fact that function precedes structure. What I insist upon in addition to this statement is that the functioning which produces structure is always mental functioning. You are all acquainted with the general distribution of the areas of functional localization over the brain. Much clinical evidence, as well as direct psychologic proof, has been adduced in demonstration of this general truth. From my standpoint I would have you think of these areas as places where mind activities produce structural changes, and that these structural changes are memory structures, which, if they were removed, would cause the loss of corresponding memories; that is, mind activity produces brain building, and not, as has been stated in the title to my address in the published program, does brain building produce mind building. Let us take some one typical sense in order to illustrate what I mean by the statement that every typical sensation within the gamut of that sense should be several times recognized and discriminated by the pupil who is undergoing brain building by the mind-using process. I will select the hearing sense, because it is directly applicable to the subject under discussion. As you all know, the ear begins to recognize sound when the oscillating body moves about sixteen vibrations per second, and that at about 30,000 to 70,000 oscillations per second the upper limit of hearing is reached. Both the upper and lower thresholds vary with different people. An untrained ear will think eighteen oscillations per second to be a continuous sound, but after some training that person will be able to hear the separate beats of that tone, and then the lower limit of his hearing will have been raised. Some persons have their lower limit at twenty-seven oscillations per second, and others higher. Most people can hear beyond 30,000 oscillations per second, but there are a few who can hear up to 70,000, 75,000, and 80,000. Between this lower and upper limit we have from 30,000 to 75,000 and 80,000 possible pitches, the range depending upon the person. Of course, in the brain-building process the pupil must hear several times repeated each one of these pitches. Then, again, each pitch may have different degrees of amplitude or loudness, and the pupil should be made to hear different degrees of this loudness several times repeated. But there is still, from the standpoint of speech and deaf-muteism, a much more important quality of tone than pitch and amplitude, namely, that of tone quality. Helmholtz long ago demonstrated that the emotional characteristics of a tone were produced by the relative loudness of the harmonics or overtones present in the so-called fundamental tone. When you sound what you suppose to be a single note upon a musical instrument, there is present in that tone, in addition to the fundamental pitch, a certain number of higher pitches, called overtones. If the lower pitches of these overtones are present, the tone quality is sad; if the higher pitches of these overtones are present, the tone quality is cheerful; and so on thru the gamut of the emotions. Helmholtz showed by an experimental demonstration that the different vowel sounds could be produced by varying the harmonics of a certain fundamental note. The error in his method consisted in the fact that the tuning-forks which he used to represent simple pitches did not give simple pitches, but compound pitches. It is probable that no one here present has ever heard a fundamental pitch devoid of overtones. The first one I heard was when, several years ago, I made the first experiment which led to the making of the electric sonometer. I succeeded in getting a tone of a single pitch. I accomplished it by placing between two electro-magnets, whose poles were separated a quarter of an inch, a thin metal disk, whose volume was such that its own pitch when struck was too high to fall within the limits of hearing. By interrupting, by means of a commutator, the current passing thru one of these magnets I was enabled to make this disk oscillate any given number of times per second, and the tone was entirely free from harmonics. By means of a series of fourteen of these disks electrically operated I was able to repeat Helmholtz' experiment with greater precision and much better results. Any one, two, or more of the overtones can by this device be sounded simultaneously with the fundamental tone, and all of the possible tone qualities can thus be produced, and any of the overtones can be given any desired degree of loudness. With this instrument it is possible to make all of the 80,000 pitches with every variation of amplitude and with all of the possible tone qualities of each pitch. To omit from the training of a child any group of pitches or tone qualities is to omit from the child's brain structural changes which might have been put there as memory structures, and it is to omit a certain amount of mind unfoldment in the child. If there are tone qualities which the child has not recognized and discriminated several times, then a certain anatomical, psychological, and logical completeness will be lacking. The way properly to train a child for brain-building purposes is this: first, the training should take place at precisely the same hour each day, so as to take advantage of the well-known phenomena of periodicity. After the third or fourth day a physiological habit will put the blood in the functional parts of the brain at about the time that the lesson is to take place, just as we get hungry at certain times at which we have habitually eaten. This vaso-motor dominancy occurs shortly before the time of the lesson, and thoroly supplies nutriment and recuperation to the cells that are soon to be used, and it provides the cells with the materials of growth and carries away the débris of previous activity. More brain growth can be produced in the fourth than in the three previous lessons because of the vaso-motor dominancy, and because of the establishment of a functional habit in those parts of the brain. The next important point is that the child should have been completely rested, should have had sufficient sleep, and should have digested the previous meal. The lesson, of course, should take place in a manner cheerful to the child. Then it should be caused to hear, by means of the electric sonometer, all of the pitches of sound, giving only the fundamental tones, and varying the amplitude of each tone so as to go from the upper to the lower limit of loudness. And then the child should hear a glide from the lowest to the highest note, including thus every possible pitch, and it should be done with different degrees of loudness. This will take some twenty minutes. It should be repeated every day at the same hour for at least five days in normal children, and perhaps for several weeks in the mentally deficient and in mutes. Then should commence the tone qualities. To the fundamental pitches from lowest to highest note should be added the first harmonic of different degrees of loudness. Thus, if you were to strike C of sixteen oscillations per second, you then add the first harmonic of thirty-two oscillations per second, and gradually increase it in loudness until the limit of musical amplitude has been reached. Then take the next higher musical interval, and so on thru the entire scale. About two octavos may be taken for the lesson, and repeated daily as long as may be needed, and then follow by the next higher two octaves, and so on until finished. Then the second octave can be added, and then the third, and so on until they have all been heard and discriminated. Then comes the training in the hearing of groups of harmonics, into which I need not now enter. In our present systems of music every note upon the piano has a different tone quality, and no two voices have the same tone qualities. It will be considerable of a novelty to you all to hear the notes of a tonic chord when the tone qualities are all the same, and a still greater surprise to hear the tonic chord in each one of the fourteen possible tone-quality changes and in each of the eight distinct group-harmonic changes. To develop any one part of the sense of hearing more than another part is to produce ataxia in the brain cells and in the mind. When a part is underdeveloped, its tendency is to become diseased; when a part is over-developed, its tendency is also to become diseased, thru congestion and other causes. Only an equable development can produce highest bodily health and highest mental soundness. In a normal child this training in the sense of hearing can be completed in four months, devoting to it twenty minutes per day.

Only when a function is developed as a whole can education normally and speedily take place. To omit any one logical or psychological part of the whole of a sense training is to introduce inexorable difficulties. I need not now dwell upon the methods for training the other senses. This method puts into the corresponding areas of the brain the memory structures which constitute mind embodiment for these mental faculties. I wish again to emphasize the statement that normal psychologic functioning cannot take place in the brain from which one important set of structures has been omitted; that such an omission causes continual difficulties in all subsequent stages of education; that under-development of any one part of the cortex produces disease and psychologic incompleteness.

THE WISCONSIN PUBLIC DAY SCHOOLS FOR THE DEAF

BY ROBERT C. SPENCER, PRESIDENT WISCONSIN PHONOLOGICAL INSTITUTE, MILWAUKEE, WIS.

The Wisconsin public day schools for the deaf grew out of the efforts of the Wisconsin Phonological Institute to promote the pure oral, or German, method of educating the deaf, the method favored by Horace Mann in his report to Massachusetts on education in Europe.

The movement in Wisconsin began in 1877 in a private day and boarding school in Milwaukee, which led to the enactment of a law in 1885 for public day schools for the deaf in incorporated cities and villages with state aid, free to all deaf children in the state.

At the present time, 1898, no less than twelve of these schools are in successful operation, located in Milwaukee, Sheboygan, Manitowoc, Marinette, Green Bay, Appleton, Oshkosh, Fond du Lac, Wausau, Black River Falls, Eau Claire, and Superior; and others will be opened September 1, 1898, in Oshkosh, Stevens' Point, Neillsville, and Oconto. They have an enrollment of 140 pupils, with twenty-four teachers and six normal students in the Milwaukee school, with an average of less than six pupils to a teacher.

Normal students for the oral education of the deaf use the Milwaukee graded school for observation and practice. They also attend classes in the State Normal School. These schools are a part of the public-school system, and have the same course of study as schools for hearing children, from which they differ only in the development of speech thru sight and touch. They generally occupy small class-rooms in buildings with hearing children, under the same management. Deaf and hearing children mingle on the playground, in manual-training classes, and elsewhere, with mutual profit and pleasure.

In these schools deaf children may commence their education at the age of four years, and continue to the age of twenty years or longer. They live at home, where they enjoy the advantages of hearing children in normal relations, avoiding the objections to institutions and institutionalism.

Altho the law allows freedom as to methods, these schools are without exception taught by the purely oral, or German, method, and do not use the sign language or finger spelling. This feature attracts the attention of teachers of the hearing, and others, who use the knowledge in teaching and dealing with pupils defective in articulation, hearing, and otherwise. Normal schools attach importance to these schools as object-lessons for their students who study and discuss them.

They are in close touch with the homes, in mutually helpful relations. They obviate the necessity of removing the deaf from home during their education, thus preserving and fostering domestic ties and affections, and leave the support and care of deaf children with parents, instead of imposing it on the state.

Financially, the experience of Wisconsin with day schools for the deaf has proven highly satisfactory. During the first ten years the saving to the state, as compared with the institutional plan, was for current expenses over $100,000. From every point of view, the Wisconsin day schools for the deaf by the purely oral, or German, method have proven an unqualified success. Illinois and Ohio have enacted similar laws, and Minnesota and California are moving in the same direction, with strong probability that the plan will become general.

In Wisconsin, day schools have not materially affected the attendance at the state school at Delaven, but have saved the necessity and cost of enlarging its accommodations or establishing another similar school. They have stimulated speech teaching in the state school, have brought more deaf children under instruction, and have greatly increased intelligent interest in, and sympathy for, the deaf.

Dr. Alexander Graham Bell, who is the highest authority on deafmuteism and deaf-mute education, pronounces the Wisconsin system of public day schools for the deaf the most important movement of the century for the improvement of their condition, worthy to be studied and copied by other states and countries.

CLOSING ADDRESS

BY ALEXANDER GRAHAM BELL, WASHINGTON, D. C.

When we study history, I think we can recognize events that form, as it were, milestones measuring progress. This gathering of teachers of the deaf, teachers of the blind, and teachers of the mentally deficient, with the great body of teachers of the country, is an event which forms a milestone in the progress of educational movement. It is the first time that we have recognized that the instruction of these classes is a department of education. Now for the first time we come in an organized manner as an integral part of the great educational organization of this country, the great educational organization of the world. I am sure that teachers of the deaf have learned much from the papers which have been read here regarding the mentally deficient, and from the papers relating to the blind. All of us have profited by these papers and addresses; and this profit has been afforded outside of this department to the general teachers in session in this city.

Let us take a glance and see what seems to have been the usual trend of thought in regard to the condition of the deaf that has culminated in this meeting, which forms not an end but a beginning of further progress. At first it was thought that the deaf should be taken away from their homes, separated from all their hearing companions and friends, and brought into huge schools where they should meet no other than the deaf. In fact, it was commonly thought that they could all be put into one large school. But the census af 1890 revealed the fact that we had 19,975 deaf children under twenty years of age in the United States, and only 7,500 in all the schools for the deaf. I do not know how it is with the blind and the feeble-minded, but these are the facts in relation to the deaf: after half a century, or the greater portion of the century, with generous contributions from the United States, and from the several states, we find that out of some 20,000 deaf children under the age of twenty-one years only 7,500 were to be found in all the schools for the deaf thruout the country. Indeed, even today there are only 9,700 in all our schools; so that our methods of reaching the deaf have failed to bring under instruction a large proportion of this class. The plan of providing schools, institutions, or boarding schools, all of them have failed; but in the last few years we have had a new policy whereby the state furnishes decentralization in the instruction of the deaf, combining day schools with the central institutions, so that children can be reached at a younger age in the day schools and in small numbers; and those who cannot attend the day schools have the state institution to go to. All children cannot attend the day schools, all children cannot go to the institutions or boarding schools. We should have both; the day school moving out into the smaller centers of population, taking in children at a younger age than they could be received into an institution. In Wisconsin, Illinois, and Ohio legislation has provided means by which teachers can be sent to the children instead of the children to the teacher; so that, if you find in a little place four or five little deaf children, with the machinery provided by legislation, teachers can be sent to them. They can live in their own homes, can be taught at four, five, and six years of age; and at a later period can either go on with their education in these day schools or go to an institution or boarding school.

Now, all that I have said in relation to the deaf would be equally advantageous to the blind and to the feeble-minded. We have in the public-school system a large body of ordinary children in the same community. We have there children who cannot hear sufficiently well to profit by instruction in the public schools, and we have children who cannot see sufficiently well to profit by instruction in the public schools, and we have children who are undoubtedly backward in their mental development. Why should not these children form an annex to the public-school system, receiving special instruction from special teachers, who shall be able to give instruction to little children who are either deaf, blind, or mentally deficient, without sending them away from their homes or from the ordinary companions with whom they are associated ? In fact, if there is one thing that seems to me clear, it is this, that the tendency of educational progress in regard to these classes is to keep to the normal environment of the child as closely as possible. A deaf child is born amidst hearing and speaking people; it has got to live in that community, and has got to be specially prepared to make a living in that community.

Now, how are we going to prepare him to live in that community? By taking him away ? Are we going to prepare him to converse with his hearing brothers and sisters, father and mother, uncles and aunts, by taking him away from them ? Now, in the case of a deaf child, nature interposes a barrier to communication with the rest of the community. We are all dumb at birth, we were all once infants. And what does infant mean ? It comes from two words, *in*, "not," and *fans*, "talking." We do not talk at birth. How do we learn to speak ? By hearing other people speak, by imitation; and if the little child happens to be born deaf, or even very slightly deaf, and the infant remains at home, it cannot be taught to speak thru imitation without the help of a special teacher. But one of the very best things we can do is to teach deaf children the language of the people with whom they live. In our country, of course, this is the English language. Now, all you who are not teachers of the deaf may learn from our work; I mean those of you who want to teach French or German to an ordinary child. The method of teaching language to the deaf may be of great assistance to you.

Now, Mr. President, in these few remarks I merely wished to emphasize my feelings that this meeting should be regarded as a milestone in the progress of education for the deaf, the blind, and the feeble-minded. And I feel that, instead of being an end, it is the beginning of a great educational movement.

LIST OF LIFE AND ACTIVE MEMBERS

ARRANGED BY STATES, CLASSES, AND YEARS OF CONTINUOUS MEMBERSHIP

REVISED TO DECEMBER 1, 1898

In preparing this list, the Secretary has found the records of annual membership very imperfect, especially in the earlier years. Every effort has been made, with the assistance of the members, to correct all errors. It is too much to hope that this has been fully accomplished. Further corrections will be made as errors are discovered. All whose names appear in the following list are invited to send to the Secretary, at once, corrections of errors and omissions.

Many early members of the association who have contributed largely to its growth and success are enrolled under recent dates because their membership has not been continuous, and no plan for indicating irregular memberships has been adopted. Many others have paid the dues for omitted years, received the volumes of proceedings, and obtained credit from the earliest years of their attendance. This privilege is still extended to all who wish to avail themselves of it.

All active members are urged to co-operate with the Executive Committee in extending this list until it includes the leading educators of every state, to the end that the association may receive their active support, and may in turn render most efficient service thru its meetings, its organized plans for educational investigation, and its published reports.

The annual active membership fee will be due at the time of annual meeting, and may be paid by a railroad membership coupon delivered to the Treasurer, by cash payment to the Treasurer during the annual meeting, or by cash remittance to the Secretary before September 1 of each year.

The marginal years indicate the date of the commencement of continuous annual membership for those whose names immediately follow. The indented years indicate date of appointment to present educational position. The names of deceased members are indicated by a *.

Extra copies of this list may be obtained by remitting thirty cents to the Secretary, Irwin Shepard, Winona, Minn.

ALABAMA

ACTIVE MEMBERS

1882. Julia S. Tutwiler.
Principal Alabama Normal College for Girls, Livingston.
1888. J. H. Phillips, A.M., Marietta Coll., O.; Ph.D., Southern Univ., Ala.
1883. Superintendent of Schools, Park Ave. and 21st St., Birmingham.
1892. F. M. Roof.
1887. Principal of Public Schools, 513, 19th St., Birmingham.
1894. Lucien V. La Taste.
Agent University Publishing Company, Box 558, Montgomery.
John Massey, A.M., '75, LL.D., '79, Univ. of Ala.
1876. President Alabama Conference Female College, Tuskegee.
1895. Mary A. Cahalan.
1884. Principal of the Powell School, 2311, 4th Ave., Birmingham.
J. B. Cunningham.
1898. Principal of High School, 600 S. 27th St., Birmingham.
*John T. Gregory, C.E., '89, Alabama Polytechnic Inst.
1894. Principal Grammar School, 996 Government St., Mobile.
Robert A. Mickle, A.B., '86, Davidson Coll., N. Car.
Principal Jefferson St. Grammar School, Mobile.

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*Died September 21, 1898.

ALABAMA—*Continued*

1895. Kate E. Moon.
Grammar Department, Public Schools, 110 N. Conception St., Mobile.
James K. Powers, A.M., '73, LL.D., '97, Univ. of Ala.
1897. President University of Alabama, University.
Charles Ben Van Wie, Ph.M., Ph.D., '94, Ill. Wesleyan Univ.
1888. Department of Pedagogy, State Normal College, Florence.
John D. Yerby, A.B., '79, Southern Univ.; A.M., '96, Univ. of Ala.
1894. Superintendent of Schools, 996 Government St., Mobile.
1897. Alabama Polytechnic Institute.
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1894. Superintendent of Public Schools, 5th Ave. E., Avondale.
J. F. Elliott.
1897. Principal of High School, Brookwood.
J. A. Knight, B.C., '87, Keochie Coll., La.; B.S., '95, Nat. Nor. Univ., Lebanon, O.
Superintendent of Schools, Mt. Willing.

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1895. Lydia L. Hunt.
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1898. Superintendent in charge of Supai Indians and School, Supai.
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Editor "Southern School Journal," 2121 Cumberland St., Little Rock.
1895. George B. Cook.
Superintendent of Schools, Hot Springs.
Abbie W. Draughon.
Teacher in 4th and 5th Grades, Central School, 392 Grand Ave., Hot Springs.
J. L. Holloway, A.M., Missouri State Normal.
1889. Superintendent of Schools, 12th and K Sts., Fort Smith.
W. W. Rivers, A.B., '86, A.M., '89, Univ. of Miss.
1894. Superintendent of City Schools, Helena.
1896. Howard Gates.
1891. Principal Kramer School, 20th and Cross Sts., Little Rock.
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1895. Superintendent of Schools, 618 W. 6th Ave., Pine Bluff.
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1895. Superintendent of Schools, 806 Broadway, Van Buren.
1897. Hendrix College.
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Professor of Education and History, Hendrix College, Conway.
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Teacher of English, Onachita Baptist College, Arkadelphia.
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Belle Bunzel.
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1898. Teacher in Public Schools, 1003 Poplar St., Pine Bluff.
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1898. Vice-Principal 6th Ave. School, 627 Walnut St., Pine Bluff.
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Principal Public School, Argenta.
Mary E. Mitchell.
Assistant in High School, 713 State Line St., Texarcana.
Maggie Murphy, M.E.L.
1890. Teacher in Public Schools, Little Rock.
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Representing American Book Co., Fort Smith.
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1895. Teacher in Public Schools, Little Rock.
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Superintendent City Schools, Little Rock.
Cora Sheber.
1894. Teacher in Public Schools, Hot Springs.
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1896. Primary Teacher Public Schools, Marianna.
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Teacher in Public Schools, Van Buren.
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1895. Principal of San Jacinto High School, 1224 Walnut St., Riverside.
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1893. Principal of High School. Santa Barbara.
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1888. Teacher in Grammar Grade, 1633 Hyde St., San Francisco.

ACTIVE MEMBERS

1889. Edward T. Pierce, LL.B., '77, Union Univ.; Pd.D., '94, N. Y. Nor. Coll.
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Department of Education, Leland Stanford Jr. University, Stanford University.
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1893. Prof. of Science and Art of Teaching, Univ. of Cal., 2341 Channing Way, Berkeley.
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1895. Principal Union High School, Redlands.
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1895. County Superintendent of Schools, 1067 Front St., San Diego.
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1898. President State Normal School, San Diego.
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535 Stimson Block, Los Angeles.
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1895. Vice-Principal State Normal School, 829 W. 11th St., Los Angeles.
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1892. Critic Teacher, State Normal School, 468 S. 6th St., San José.
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1890. Instructor in State Normal School, 1007 W. 21st St., Los Angeles.
Thomas J. Kirk.
County Superintendent, Fresno Co., 1637 N. J St., Fresno.

*Died September 16, 1897.

CALIFORNIA—*Continued*

1895. Joseph Le Conte, A.B., '41, A.M., '45, LL.D., 79, Univ. of Ga.; LL.D., '96, Princeton; M.D., '45, Coll. of Phys. & Surg., N. Y.; B.S., '51, Harvard Univ.
1868. Professor Geology and Nat. Hist., Univ. of Cal., 2739 Bancroft Way Berkeley.
J. B. Monlux, A.M., '81, Iowa State Univ.
1896. Principal 28th St. School, 250 E. 30th St., Los Angeles.
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1897. Principal of Public Schools, P.O. Box 16, Santa Rosa.
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1897. Principal Training Department, State Normal School, 129 E. Julian St., San José.
1897. Christine Benson.
316½ W. 3d St., Los Angeles.
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1896. Instructor in Pedagogy and Director of Sloyd, 377 N. Las Robles Ave., Pasadena.
Free Public Library of San Francisco.
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Director Kindergarten Department, State Normal School, Los Angeles.
Fernando Sanford.
1891. Professor of Physics, Leland Stanford Jr. University, Stanford University.
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1885. Principal Lincoln Evening School, 407 Fair Oak St., San Francisco.
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1886. Superintendent State Institute for Feeble-Minded; 1896, Professor Nervous and Mental Diseases, College of Physicians and Surgeons, San Francisco; Eldridge.
State Normal School Library, San José.
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1897. Superintendent of Schools of Arapahoe Co., 375 Broadway, Denver.
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1882. Teacher in Gilpin School, Denver.
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Teacher of Latin and English, High School, 3325 Osceola St., Highlands Station, Denver; Editor "Colorado School Journal."
A. E. Beardsley, B.S., '78, Cornell Univ.; M.S., '98, Univ. of Colo.
1892. Professor of Biology, State Normal School, 1412, 10th St., Greeley.
Helen Mar Brown.
1894. Principal Sheridan School, 1541 Race St., Denver.
George Lyman Cannon, Jr.
1887. Instructor in Geology and Biology, East Denver High School, Denver.
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1893. Superintendent of Schools, 820 Pine St., Boulder.

COLORADO—*Continued*

1895. Charles Ernest Chadsey, A.B., '92, A.M., '93, Stanford; A.M., '94, Ph.D., '97, Columbia.
1898. Superintendent of City Schools, Durango.
Fred Dick, A.M., Hamilton Coll., N. Y.
Principal Normal and Preparatory School, 1543–45 Glenarm St., Denver.
John Dietrich.
1893. Superintendent of City Schools, 1824 N. Nevada Ave., Colorado Springs.
E. Waite Elder, A.B., '91, A.M., '94, Princeton.
1895. Science Master, State Preparatory School, Boulder.
John B. Garvin, B.S., '86, Univ. of Illinois.
1890. Instructor in Chemistry, High School, Dist. No. 1, 2536 W. 34th St., Denver.
Edward F. Hermanns.
1891. Principal of High School, Dist. No. 2, 425 Broadway, Denver.
Mrs. F. R. Houghan.
1873. Principal of Gilpin School, Plymouth Place, Denver.
Joseph P. Jackson, LL.B., '76, Iowa Univ.; A.M., '80, Oskaloosa Coll.
1894. Superintendent of Schools, Box 743, Leadville.
John F. Keating, A.B., '92, Ohio Wesleyan Univ.
1896. Superintendent of Public Schools, Dist. No. 20, 1102 Lake Ave., Pueblo.
Charles Joseph Ling, B.S., '90, Cornell Univ.
1894. Instructor in Physics, Manual Training High School, Denver.
Clara Louise Little,
Teacher in Public Schools, Delgany School, Denver.
J. S. McClung.
1879. Superintendent of Schools, Dist. No. 1, 423, 11th St., Pueblo.
Miss A. N. Miller.
1887. Principal Garfield School, 1037 S. 9th St., Denver.
Dora M. Moore.
1893. Principal Corona School, 1031 Emerson St., Denver.
C. M. Osenbaugh.
1891. Principal Swansea School, 250 S. Clarkson St., Denver.
Charles Skeele Palmer, A.B., '79, A.M., '82, Amherst; Ph.D., '86, Johns Hopkins.
1887. Professor of Chemistry, University of Colorado, 1224 Pine St., Boulder.
Sidney Fuller Smith.
Instructor in Physics, High School, Dist. No. 1, 1470 Steele St., Denver.
E. R. Snyder, B.Pd., '95, Colo. Nor. Sch.
1897. Principal of Public Schools, New Windsor.
Jessie Wing.
1897. Teacher in Primary Department, 15 Block St., S. Pueblo.
W. J. Wise, B.S., '84, A.M., '88.
1893. Superintendent of Schools, 1864 S. Washington St., South Denver.
1896. O. J. Blakesley, B.S., Pd.D.
1896. Superintendent of Schools, La Junta, Colo.
Ida Brock Haslup, Ph.B., Ill. Wes. Univ.
1892. Principal of High School, 211 Broadway, Pueblo.
Mrs. Z. X. Snyder.
Greeley.
1897. Izora Scott, A.B., '87, Kan. Nor. Coll.
1894. Assistant in High School, 425 Broadway, Pueblo.
State Normal School at Greeley.
President, Z. X. Snyder; Librarian, Joseph F. Daniels, Greeley.
1898. Lola M. Miller.
1895. Teacher 5th Grade, Lincoln School, 160 S. Denver Ave., Denver.
H. W. Zirkle, A.B., '83, A.M., '95, Polytechnic Inst., Va.
Principal of Elmwood School, 357 Lincoln Ave., Denver.

CONNECTICUT

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1892. Principal High School, Old Saybrook.
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1877. Superintendent of Schools, Central District, 7 Huntington Pl., Norwich.
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1897. Principal of Hillhouse High School, New Haven.
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1895. Superintendent of Schools, New Canaan.

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1898. **Wilbur Fisk Gordy.**
1884. Supervising Principal, 2d North School District, 104 Gillette St., Hartford.
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1895. Training Teacher State Normal School, Willimantic.

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1886. Late Rector Catholic University of America, Washington.

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1891. President of Spencerian Business College, 7th and D Sts., Washington.
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1890. Principal Business High School, 1st St., between B and C Sts., N.W., Washington.
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1889. Director of Sewing, Public Schools, 1447 Pierce Place, Washington.
Benaiah Longley Whitman, A.B., '87, A.M., '90, Brown Univ.; D.D., '94, Bowdoin Coll.
1895. President of Columbian University, 2115 Bancroft Place, Washington.
1896. **Powhatan W. Robertson**, M.Accts., '81, Eastman Nat. Bus. Coll.
1894. Columbian University, 2232 Q St., N. W., Washington.
Rebecca Stoneroad, Graduate Oswego Normal School.
1889. Director of Physical Training, Public Schools, Webster School, 10th and H Sts., Washington.
1897. **Court Foster Wood**, LL.B., '84, LL.M., '86, Columbian Univ.
1885. Principal of Wood's Commercial College, 311 E. Capitol St., Washington.
1898. **Job Barnard**, LL.B., '67, Univ. of Mich.
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Zue Hunter Brockett.
Teacher of Physical Training in Public Schools, 3425 Holmead Ave., N. W., Washington.
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1895. Teacher, Deanwood.
Elizabeth V. Brown.
Teacher in Normal School, 34 B St., N. E., Washington.
Ellis W. Brown.
Supervisor of Public Schools, Lincoln School, Washington.
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1890. Agent Bureau of Education for Alaska, Bureau of Education, Washington.

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Teacher of German, Central High School, Washington.

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H. M. Johnson.
Principal Eastern High School, Washington.

Lewis A. Kalbach, '83–'86, U. S. Naval Academy.
Specialist in Higher Education, Bureau of Education, Washington.

Artemas Martin, Ph.D., '82, Rutgers; LL.D., '85, Hillsdale; A.M., '87; Fellow of the Amer. Assn. for the Advancement of Science; Member of the London, Edinburgh, and N. Y. Mathematical Societies.
Librarian U. S. Coast and Geodetic Survey, 1534 Columbia St., Washington.

E. E. McCaslin. A.B., '92, A.M., '95, Antioch Coll.
Principal of Schools, Industrial Home School, Washington.

Kelly Miller, A.B., '86, Harvard.
1890. Professor of Mathematics, Howard University, Washington.

Winfield Scott Montgomery. A.B., '78, Dartmouth.
Principal High School, 9th, 10th, and 11th Div., 1912, 11th St., N. W., Washington.

Sophie F. E. Nussbaum, Grad. Teacher's Sem., Rostock, Meckl. Schwerin, and Conservatory of Music, Dresden, Germany.
1889. Bureau of Education, Washington.

Arthur A. O'Neill.
Secretary Board of Trade, Washington.

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1896. Director of Kindergarten, Buchanan School, The Concord, New Hampshire Ave. and S St., Washington.

Warren W. Phelan, A.B., '94, A.M., '96, Columbia Coll.
Principal National Capital University School, 822 Conn. Ave., N. W., Washington.

Lovich Pierce, A.B., '60, Emory Coll.
1893. Clerk in Bureau of Education, Washington.

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Member of Scientific Temperance Committee, 720, 19th St., N. W., Washington.

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Principal of Mt. Vernon Seminary, 11th and M Sts., N. W., Washington.

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1894. Statistician U. S. Bureau of Education, Washington.

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1936, 4th St., N. W., Washington.

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1895. O. Clute, LL.D., Agri. Coll., Mich.
1893. President of State Agricultural College, Lake City.

J. L. Hollingsworth, A.B., '88, Emory Coll., Oxford, Ga.
1893. County Superintendent of Public Instruction, Bartow.

1898. L. W. Bucholz, Nor. Sch., Pr. Friedland, Germany.
Superintendent of Public Instruction, Hillsboro Co., Tampa.

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1868. Superintendent of Schools, Chatham Academy, Savannah.

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1895. Department of English, State Normal School, Athens.

1894. Otis Ashmore, A.M., Univ. of Ga.
1896. Superintendent of Schools, Savannah.

G. G. Bond, A.M., '95, Univ. of Ga.
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Frank L. Morse, A.B., '86, A.M., '89, Brown Univ.
Principal of Hayes School, 393 Warren Ave., Chicago.
Fanny E. Oliver.
1885. Principal of Montefiore School, 390 Washington Boul., Chicago.
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Superintendent of Schools, Carlinville.
Hugh A. Owen, Graduate of State Normal School.
1891. Principal of High School, Box 193, Maywood.
Daniel Baldwin Parkinson, A.M., '74, Ph.D., '98, McKendree Coll.
1898. President Southern Illinois Normal University, 335 Walnut St., Carbondale.
Mary Reid Pierce.
1898. Agent American Book Co., 521–531 Wabash Ave., Chicago.
Frederick W. Plapp, A.B., '85, Dartmouth Coll.
1890. Assistant in High School, 2549 N. 42d Ave., Station 35, Chicago.

ILLINOIS — *Continued*

1897. Mrs. Andrea Hofer Proudfoot.
Editor "Child Garden," 9333 Prospect Ave., Chicago.
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1876. Superintendent of Schools, Downer's Grove.
Louise D. Rennick.
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1889. Principal of Gresham School, 817 W. 87th St., Chicago.
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1897. Superintendent of City Schools, District No. 1, 819 Ohio Ave., East St. Louis.
George A. Robbins.
1891. Teacher of Woodwork, Public Schools, 6922 Union Ave., Chicago.
H. L. Roberts.
1895. Superintendent of Public Schools, Farmington.
Joseph L. Robertson.
1894. County Superintendent of Schools, Court House, Peoria.
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Teacher, 3111 Michigan Ave., Chicago.
George H. Shorney.
Hope Publishing Co., 84 Wabash Ave., Chicago.
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1897. Director of Bradley Polytechnic Institute, Peoria.
Eva A. Smedley.
1898. Principal of Noyes St. School, Evanston; 138 Wells St., Chicago.
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1897. Superintendent of Schools, 523 E. Madison St., Belvidere.
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1881. Principal of Avondale School, 1571 Kimball Ave., Station Y, Chicago.
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1885. Principal of Oakland Grammar School, 3995 Drexel Boul., Chicago.
A. J. Tiffany.
Publisher "Natural Science Cabinet," 210 E. 40th St., Chicago.
Emma J. Todd.
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Henry L. Tolman, A.M., '69, Rochester Univ.
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William Welton.
1893. Principal Public Schools, Lansing.
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1890. Principal of School, Blue Mound.
1898. John A. Forbes.
With Sheldon & Co., Educational Publishers, 315 Wabash Ave., Chicago.
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1890. Principal of Schools, Carrollton.

INDIANA

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1883. President of Purdue University, 191 Columbia St., Lafayette.

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1883. Professor of Mathematics, Purdue University, 11 Waldon St., W. Lafayette.
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1887. Professor of Philosophy, 1893; Vice-President, Indiana University, Bloomington
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1891. Superintendent of Public Schools, Vincennes.
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1893. President of Indiana University, 328 Kirkwood Ave., Bloomington.

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* Died September, 1897.

1893. H. G. Woody, B.S., National Normal Univ.
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1895. State Superintendent of Public Instruction, 2026 Central Ave., Indianapolis.
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1894. Superintendent of Schools, 2329 College Ave., Indianapolis.
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1894. Superintendent of City Public Schools, 428 Chandler Ave., Evansville.
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1887. Prof. of History and Political Science, Earlham Coll., 30 Central Ave., Richmond.
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1895. Superintendent of Schools, Rising Sun.
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1882. Superintendent of Schools, Room 11, Central Building, Rochester.
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1882. Superintendent Indianapolis Free Kindergartens, 2320 N. Meridian St., Indianapolis.
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1898. Vice-President and Professor of Philosophy, Earlham College, Richmond.
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1887. Superintendent City Schools, 53 Poplar St., Huntington.
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1896. Superintendent Public Schools, Aurora.
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1890. Superintendent of City Schools, Frankfort.
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1896. Superintendent of Schools, Richmond.
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Flora Roberts, B.S., '87, M.S., '98, Purdue Univ.
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1886. Superintendent of City Schools, 506 Pigeon St., Elkhart.

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1869. Superintendent of Schools, 451 N. 7th St., Terre Haute.
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1896. President of Vincennes University, Vincennes.
1897. ADELAIDE STEELE BAYLOR, Ph.B., '97, Univ. of Chicago.
1888. Principal of High School, 108 E. Hill St., Wabash.
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1890. Superintendent of City Schools, 178 W. 12th St., Anderson.
JOHN COOPER, A.M.
Principal Ward School, 8 Brightwood Ave., Indianapolis.
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1895. Superintendent of City Schools, Box 552, Mt. Vernon.
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IOWA

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1863. President of Cornell College, Mt. Vernon.
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1891. President of Iowa State College of Agriculture and Mechanical Arts, Ames.
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Ex-State Superintendent of Public Instruction, 615 Iowa Loan and Trust Building, Des Moines.
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1889. Superintendent of Schools, 313, 8th Ave., Clinton.
1892. J. M. MEHAN.
1884. President Capital City Commercial College, Y. M. C. A. Building, Des Moines.
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1890. Superintendent of City Schools, 518, 7th St., Cedar Rapids.
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1891. Superintendent of Schools, 753, 17th St., Des Moines.
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1898. Superintendent of City Schools, Cherokee.

1894. A. B. WARNER.
1896. Superintendent of Schools, Missouri Valley.
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1898. Superintendent of Public Schools, Sanborn.
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1892. Superintendent of Schools, Walnut.
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1895. Superintendent of City Schools, 602 N. Maple St., Creston.
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1886. Principal E. Waterloo High School, Waterloo.
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1888. Superintendent of Schools, 920 Main St., Cedar Falls.
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ETTA SUPLEE.
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FANNIE SUPLEE.
1893. Principal Grant School, West Des Moines, 1045, 9th St., Des Moines.
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1892. Superintendent of City Schools, Fairfield.
1896. RICHARD C. BARRETT, A.M., '94, Cornell Coll., Ia.
1898. State Superintendent of Public Instruction, Des Moines.
WILLIAM BEAL.
1895. Principal of High School, Maynard.
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Winterset.
O. E. McFADON.
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C. F. McNEVIN, B.S., M.Acc't.
Claremont.
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1886. Superintendent of Public Schools, 427 Story St., Boone.
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1894. Instructor in Manual Training and Mechanical Drawing, 1304 Center St., Des Moines;
FRANKLIN T. OLDT, A.M.
1895. Superintendent of City Schools, 1240 Locust St., Dubuque.
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President Cedar Rapids Business College and Editor of "Western Penman," Cedar Rapids.
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1894. Supervisor of Kindergartens, 1013, 21st St., Des Moines.
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1896. Superintendent of Schools, 206 W. Grant St., Marshalltown.
J. B. YOUNG, A.B., '61, A.M., '64, Middlebury Coll.
1878. Superintendent of Schools, 422 E. 14th St., Davenport.
1897. C. C. BAUMANN.
Teacher of French and German in High School, 1511 Harrison St., Davenport.
EUGENE BROWN, B.S., Iowa Agri. Coll.
Superintendent of Schools, Cerro Gordo Co., Mason City.
J. L. BUECHELE, Ph.B., '86, Cornell Coll., Iowa.
1896. Superintendent City Schools, Independence.
H. T. BUSHNELL.
1873. Principal of Grammar School No. 8, Farnam St. and South Ave., Davenport.
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Superintendent of Public Schools, Eldora.
MRS. E. DUDLEY, A.B., '84, A.M., '87, Cornell Coll.
1893. Assistant Principal in High School, Paullina.
JAMES F. EATON, A.B., B.D., A.M., D.D.
1894. Professor in Hull Educational Institute, Hull.
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HERBERT B. HAYDEN.
1898. Superintendent of Schools, 148 Glen Ave., Council Bluffs.
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1898. Principal Audobon School, 315 Bluff St., Dubuque.
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1896. Superintendent of Schools, Monona Co., Onawa.
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1893. Superintendent of City Schools, 226 W. 9th St., Mason City.
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1895. County Superintendent of Schools, Waukon.
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IOWA—*Continued*

1897. State University Library of Iowa.
Librarian, Mrs. Bertha G. Ridgeway, Iowa City.
Cynthia Titus, B.D.
1898. Principal of Lowell School, 1102 Washington St., Waterloo.
V. L. Wilson.
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1885. Superintendent of Schools, 1314 Mulberry St., Muscatine.
C. F. Woodward, A.B., A.M., Cornell Coll.
1898. County Superintendent of Schools, Eldora.
1898. Cecilia Adams, '88, Chicago Froebel Assoc.
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Superintendent of City Schools, 307 Jackson St., Sigourney.
J. D. Stout, B.D., '82, B.S., '83, N. Ind. Nor. Sch.
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KANSAS

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Principal of Public Schools, South Haven.
John MacDonald.
Editor "Western School Journal," Topeka.
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1896. President Emeritus of Washburn College, Topeka.
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1893. Principal of High School, 2020 N. Walnut St., Kansas City.
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Publisher of "Concordia Empire," Concordia.
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1892. Superintendent of Schools, Topeka.
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1893. Superintendent of Schools, 609 N. Topeka Ave., Wichita.
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1890. Principal Main St. School, Fort Scott.
1893. Francis Huntington Snow, Ph.D., '81, LL.D., '90, Princeton.
1890. Chancellor of University of Kansas, Lawrence.

KANSAS — *Continued*

1894. Etta I'Dell Clarke.
Teacher of Music, 1025 Constitution St., Emporia.
Elva Enola Clarke.
1893. Librarian of State Normal School, 1025 Constitution St., Emporia.
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1897. Principal Clay School, 523 Van Buren St., Topeka.
1895. M. A. Bailey, A.M., '79, Wesleyan Univ. of Conn.
1885. Teacher of Mathematics, State Normal School, 218 W. 12th Ave., Emporia.
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1894. President Baker University, Baldwin.
Miss C. S. Newell.
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1893. Superintendent of City Schools, Cottonwood Falls.
E. A. Simerwell.
1892. Principal of Grant School, 1209 N. Western Ave., Topeka.
1896. Byron Dean Van Ostrand, B.S., '84, Cornell Univ.
1894. Superintendent of City Schools, Marion.
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1897. Mrs. Gaston Boyd.
Supervisor of Music, Public Schools, and Director of the Department of Elocution and Physical Culture, Bethel College, Newton.
Charles A. Boyle.
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1896. Superintendent of City Schools, 617 Exchange St., Emporia.
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Superintendent Haskell Institute, Indian Industrial Training School, Lawrence.
Walter G. Riste.
Principal of County High School, Colby.
Frank P. Smith, A.B., '78, Ind. Univ.; A.M., '90, Baker Univ.
1894. Superintendent of Schools, 900 Tennessee St., Lawrence.
State Agricultural College of Kansas.
Librarian, Helen J. Wescott, Manhattan.
Mrs. E. Davidson Worden.
1896. Superintendent of The Topeka Kindergarten Association, 221 W. 10th Ave., Topeka

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1896. Superintendent of Schools, Dayton.
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1896. Superintendent of Schools, 829 Scott St., Covington.
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1895. Principal Montgomery School, 2427 W. Chestnut St., Louisville.
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1890. Superintendent of City Schools, Winchester Ave. and 22d St., Ashland.
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1876. Principal of Public Schools, 956, 5th St., Louisville.
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1889. Teacher in Primary Department, 2111 W. Chestnut St., Louisville.
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1895. State Superintendent of Public Schools, 295 Minot Ave., Auburn.
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1895. Supervisor of Schools, Boston; Newton Center.
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1890. Superintendent of Schools, Brookline.
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1897. Instructor in Natural Science, State Normal School, 5 Montana St., North Adams.
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1895. Superintendent of Schools, 4 Elmwood Ave., North Adams.
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Assistant Professor of History and Art of Teaching, Harvard University, Cambridge
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1897. Professor of History, Harvard University, 15 Appian Way, Cambridge.
Harvard College Library.
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1894. Secretary State Board of Education, 366 Harvard St., Cambridge.
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Agent for Ginn & Co., Schoolbooks, 13 Tremont Place, Boston.
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Alonzo Meserve.
1886. Master of Bowdoin School, 87 Linden St., Allston Station, Boston.

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1895. Superintendent of Schools, Medford.
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Author, 179 Devonshire St., Boston.
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1892. Director of Posse Gymnasium and Editor "Posse Gymnasium Journal," 23 Irvington St., Boston.
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Member of firm of Leach, Shewell & Co., 68 Chauncy St., Boston.
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1895. Principal of State Normal School, 55 Garnet St., Fitchburg.
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1897. Superintendent of Schools, Turner's Falls.
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Educational Publisher, with D. C. Heath & Co., 110 Boylston St., Boston; res., West Newton.
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1894. Assistant Professor Harvard University, 7 Scott St., Cambridge.
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1890. Ferris S. Fitch, A.B., '77, Univ. of Mich.
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1883. Supervisor of Drawing, Windermere Apartments, Detroit.
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1895. Professor of English Language and Literature, Hope College, 236 Columbia Ave., Holland.
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1898. Superintendent of Schools, Ann Arbor.
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Superintendent of Schools, 405 N. Warren St., Saginaw, E. S.
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1887. Superintendent of Schools, 18 S. Main St., Vassar.
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1895. Educational Author, 347 E. Main St., Battle Creek.
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1891. Principal of Amos School, Military Ave., Detroit.
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1890. Principal of High School, 1020 Adelaide St., Fenton.
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1893. Superintendent of Schools, Decatur.
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Anna A. Schryver.
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MICHIGAN—*Continued*

1896. **Harriet M. Scott.**
1886. Principal Normal Training School, The Alhambra, Detroit.
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1886. Supervisor of Music, 91 Watson St., Detroit.
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Superintendent of Schools, Romeo.
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1894. Superintendent of Schools, 617 Stephenson Ave., Menominie.
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1879. Professor of Chemistry, Albion College, 1101 Michigan Ave., Albion.
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1896. Principal Central Michigan State Normal School, Mt. Pleasant.
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The Public Library of Detroit.
Librarian, H. M. Utley, Detroit.
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William Hearns White, Ph.B., '89, Albion Coll.
State Agent for the American Book Co., Grand Rapids.
1898. **General Library, University of Michigan.**
President, James B. Angell; Librarian, Raymond C. Davis.
E. M. Hartman, M.L., Univ. of Mich.
1895. Principal of Schools, Marlette.

MINNESOTA

LIFE DIRECTOR

1870. **William F. Phelps**, A.M., '52, Union Coll, N. Y.
Director, State Normal Schools, 512 Washburn Boul., St. Paul.

LIFE MEMBERS

1864. **Calvin Smith Pennell**, A.M., '50, Colby Univ.
Ex-Professor of Moral and Mental Phil., Washington Univ., St. Louis, Mo., 2245 Knapp St., St. Anthony Park.
1890. **Board of Education**, Independent School District No. 3, Northfield.
President, W. A. Hunt, M.D.; Secretary, S. Finkelson, Northfield.

ACTIVE MEMBERS

1880. **D. L. Kiehle**, A.B., '61, A.M., '64, LL.D., '87, Hamilton Coll., N. Y.
1893. Professor of Pedagogy, Univ. of Minn., 2800 Portland Ave., Minneapolis.
1883. **Irwin Shepard**, A.B., '71, A.M., '74, Ph.D., '93, Olivet Coll., Mich.
1893. Secretary of National Educational Association, 118 W. Wabasha St., Winona.
1886. **Frederick E. Stratton**, A.B., '71, A.M., '74, Williams Coll.; Ph.D., '91, Ill. Wesleyan Univ.
1892. Principal of Academy, Carleton College, Northfield.
1890. **Robert Eduard Denfeld**, A.B., '76, A.M., '77, Amherst Coll.
1885. Superintendent of Schools, Central High School, Duluth.
1892. **Virgil G. Curtis**, A.M., Tufts Coll.
768 Goodrich Ave., St. Paul.
1893. **Charles M. Jordan**, Ph.D., '92, Tufts Coll.
1892. Superintendent of Schools, 615 E. 18th St., Minneapolis.
A. W. Rankin, A.B., '80, University of Minn.
1895. State Inspector of Graded Schools, 1529 University Ave. S. E., Minneapolis.
1894. **George B. Aiton**, A.B., '81, A.M., '87, Univ. of Minn.
1893. State Inspector of High Schools, 1601 University Ave. S. E., Minneapolis.

1894. Sarah C. Brooks.
Supervisor of Kindergartens and Primary Work, 631 Westminster St., St. Paul.
S. A. Farnsworth.
1886. Principal of Cleveland High School, 529 Case St., St. Paul.
J. G. Hopkins.
318 West King St., Winona.
L. Grace Hopkins.
Stenographer, State Normal School, 318 W. King St., Winona.
Isabel Lawrence.
1879. Training Teacher in Normal School, 417, 2d Ave. S., St. Cloud.
Livingston C. Lord.
1888. President of State Normal School, Morehead.
Lucia M. Miller.
Principal of Webster School, 631 Westminster St., St. Paul.
Mary L. Olds.
1889. Principal of Washington School, 301 E. 3d St., Duluth.
William Wirt Pendergast, A.M., '93, Bowdoin Coll., Me.
1893. Superintendent of Public Instruction, St. Paul; residence, Hutchinson.
Mrs. Louise Preece.
Teacher of Elocution, Hotel Berkeley, Minneapolis.
Alex M. Rowe, A.B., '70, A.M., '79, Oberlin Coll.
1897. Superintendent of Schools, Little Falls.
1895. F. J. Bomberger, B.S.
1894. Superintendent of Schools, Zumbrota.
A. E. Engstrom, A.B., '78, A.M., '81, Carleton Coll.
1881. County Superintendent of Schools, Cannon Falls.
Thomas J. Gray.
University of Minnesota, College of Medicine, 602 Nicollet Ave., Minneapolis.
F. V. Hubbard.
1896. Superintendent of Schools, Red Wing.
C. W. G. Hyde.
Asst. State Superintendent of Public Instruction, 1983 St. Anthony Ave., St. Paul.
George R. Kleeberger.
1895. President of State Normal School, St. Cloud.
S. S. Parr.
1889. Superintendent of City Schools, 520, 2d Ave. S., St. Cloud.
Samuel J. Race, B.L., Univ. of Pa.
1886. County Superintendent of Schools, Redwood Falls.
*Edward Searing.
1880. President State Normal School, Mankato.
W. A. Shoemaker, Pd.M., '98, N. Y. Univ.
1881. Teacher of Mathematics and Methods, State Normal School, 921, 10½ Ave. S., St. Cloud.
Willliam G. Smith,
Editor "School Education," Secretary Educational Press Association, 26 Washington Ave. S., Minneapolis.
James W. Strong, A.B., '58, A.M., '61, D.D., '72, Beloit Coll.; LL.D., '96, Ill. Coll.
1870. President of Carleton College, 108 College Ave., Northfield.
Adolph C. Tibbetts.
1896. Superintendent of Schools, St. Charles.
Frank A. Weld.
1895. Superintendent of Schools, 515 S. 3d St., Stillwater.
1896. C. A. Ballard, B.S., '94, Univ. of Minn.
1894. Superintendent of Schools, Fergus Falls.
J. D. Bond, B.S., '72, M.S., '73, Milton Coll., Wis.
1872. Assist. Superintendent in Public Schools, 451 Marshall Ave., St. Paul.
Clarence M. Boutelle, LL.D., '96, St. Stephen's Coll., Annondale, N. Y.
1895. Superintendent of Schools, Marshall.
Mrs. Alice W. Cooley.
1895. Supervisor of Primary Schools, 1674 Hennepin Ave., Minneapolis.
R. W. Cranston.
1898. Agent for Sheldon & Co., 1928 Portland Ave., Minneapolis.
C. C. Curtiss, A.M., Hamilton Coll.
President of Curtiss' Commercial College, 506½ Nicollet Ave., Minneapolis.
James J. Dow, A.B., '74, A.M., '78, Carleton Coll.
1875. Superintendent of School for the Blind, Faribault.
Etta J. Fay.
1892. Teacher Intermediate Grade, Washburn Memorial Orphan Asylum, Station D, Minneapolis; home address, Richfield.
Waldo W. Hobbs.
1892. Principal N. S. High School, 48 N. 16th St., Minneapolis.
Janet H. Nunn.
1891. Teacher of Latin, High School, 161 W. Wabasha St., Winona.
Bonnie E. Snow.
1896. Supervisor of Drawing, Public Schools, 801 E. 15th St., Minneapolis.
Helen Ford Staples.
1891. Teacher Primary Department, 127 E. Broadway, Winona.
J. A. Vandyke, A.M., '90, B.Pd., '89, B.Ph., '87, Univ. of Iowa.
1892. Superintendent of Schools, Wabasha.
William Franklin Webster, A.B., '86, Univ. of Minn.
Principal of East Side High School, 1025, 5th St., S. E., Minneapolis.
1897. I. I. Bargen.
1890. County Superintendent of Schools, Mountain Lake.
William A. Bartlett, B.S., '87, A.M., '90, Iowa Coll.
1896. Principal of High School, 214 W. Wabasha St., Winona.

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*Died October 22, 1898.

MINNESOTA—*Continued*

1897. A. B. Christy, Ph.M.
Superintendent of Schools, Allen Ave. and Oak St., East Grand Forks.
Anna H. Christy, Ph.M., '79.
Principal of High School, Allen Ave. and Oak St., East Grand Forks.
Herbert R. Edwards, Ph.B., '91, Alfred Univ.
Principal of High School, Wheaton.
Frances A. Elmer.
Teacher of Latin, State Normal School, 264 W. Wabasha St., Winona.
Lyman H. Ford, A.B., '92, A.M., '93, Univ. of Wooster.
1893. Superintendent of Schools, Owatonna.
George A. Franklin, Grad., '77, Nor. Sch., Normal, Ill.
1894. Superintendent of Schools, 630 Main St., Faribault.
Laura Hand.
1893. Principal of Van Buren School, 598 Grand Ave., St. Paul.
P. P. Kennedy, B.S., '90, Univ. of Minn.
1895. Superintendent of Schools, Fairmont.
Mary A. Keyes.
Critic Teacher, State Normal School, Winona.
Mary E. Lynch.
Primary Teacher, 118 Mark St., Winona.
L. J. Rocholl.
Superintendent of Schools, Stearns Co., 511, 7th Ave. N., St. Cloud.
C. L. Sawyer, A.M., '91, Dartmouth; LL.B., '97, Univ. of Minn.
1892. Principal of South High School, 827, 15th Ave. S., Minneapolis.
Bertha Scofield.
Teacher in Brownsville Schools; Caledonia.
Hiram Worcester Slack, Ph.B., '95, Ill. Wes. Univ.
1876. Principal of Schools, 735 Olive St., St. Paul.
Alma B. Stanford.
1894. Principal of High School, Northfield.
State Normal School at Moorhead.
President, Livingston C. Lord; Librarian, Henry Johnson, Moorhead.
State Normal School at St. Cloud.
President, George R. Kleeberger, St. Cloud.
State Normal School at Winona.
Librarian, Ida D. Aikins, Winona.
James A. Tormey, B.L., '95, Univ. of Wis.
1896. Superintendent of Schools, Winona.
Miss E. Walker.
Principal of Lincoln School, The Portland, St. Paul.
Ellen F. Wheaton.
Principal of Van Cleve School, 738 E. 16th St., Minneapolis.
1898. George Lancaster.
1896. Assistant in High School, Hutchinson.
W. F. F. Selleck, Ph.B., '98, Ill. Wes. Univ.
1892. Superintendent of Schools, 804 Freeborn St., Austin.
A. J. Smith, A.M.
1898. Superintendent of Schools, 10th and Minnesota Sts., St. Paul.
Lillian M. Tompkins, A.B., '97, Ann Arbor.
1897. Teacher of History and Civics, High School, 204 Wabasha St., Winona.
G. O. Virtue, A.M., '93, Ph.D., '97.
1897. Instructor in History and Civics, State Normal School, 152 W. Wabasha St., Winona.

MISSISSIPPI

ACTIVE MEMBERS

1890. J. R. Preston.
1896. Superintendent of Schools, Water Valley.
1892. Dabney Lipscomb, A.M., '81, Univ. of Miss.
1895. Professor of English and of Belles-lettres, University of Mississippi, Oxford.
1894. Robert B. Fulton, A.B., '69, A.M., '74, Univ. of Miss.; LL.D., '95, Univ. of Nashville.
1875. Professor of Phys. and Astronomy; 1892, Chanc., Univ. of Mississippi, University
1895. E. E. Bass, B.L., '83, Mo. State Univ.
1884. Superintendent of City Schools, 509 N. Broadway, Greenville.
1896. A. A. Kincannon, A.B., M.S., Lebanon, O.
1896. State Superintendent of Education, Jackson.
Richard M. Leavell, A.B., '59, Univ. of Miss.; LL.D., '89, Miss. Coll.
1890. Professor of History and Philosophy, Univ. of Mississippi, University.
1897. J. G. Deupree, A.B., A.M., Howard Coll., Ala.; LL.D., S. W. B. Univ., Tenn.
1896. Professor of Pedagogy, University.
John Clayton Fant, A.M., '92, Emory and Henry Coll.; Pd.M., '95, N. Y. Univ.
1896. Superintendent of Schools, The Highlands, Meridian.
W. I. Thames, Grad. N. Nor. Univ., A.B.
Principal of High School, Poplarville.

MISSOURI

LIFE DIRECTORS

1877. F. Louis Soldan, LL.D., '83, South Carolina Univ.
1895. Superintendent of Schools, 3634 Flad Ave., St. Louis.
1886. J. M. Greenwood, A.M., '73, Univ. of Missouri.
1874. Superintendent of Schools, Room O, Public Library Building, Kansas City.

LIFE MEMBERS

1871. James B. Merwin.
Editor "American School and College Journal," 3609 Palm St., St. Louis

1886. Charles Henry Evans, A.M., '78, William Jewell Coll., Liberty, Mo.
1877. Editor of "American College and Public School Directory," 915 Locust St., St. Louis.
G. I. Harvey.
1895. Principal Switzer School, 2204 Troost Ave., Kansas City.

ACTIVE MEMBERS

1887. Calvin Milton Woodward, A.B., '60, Harvard Univ.; Ph.D., '84, Washington Univ.
1870. Professor of Mathematics and Applied Mechanics; 1879, Director Manual Training School, Washington University, 3013 Hawthorne Boul., St. Louis.
James U. White, B.S., '85, M.S.D., Missouri State Nor. School.
1892. Superintendent of City Schools, 410 Madison St., Jefferson City.
1889. *George L. Osborne, A.M., '68, Waynesburg, Pa., Coll.; LL.D., '85, Central Univ., Richmond, Ky.
1875. President of State Normal School, 2d Dist., Warrensburg.
1890. Mrs. Matilda Evans Riley.
1887. Director of Drawing, Public Schools, Board of Education Building, St. Louis.
1891. John R. Kirk.
1895. State Superintendent of Public Schools, Jefferson City.
George Thomas Murphy.
1890. Assistant Superintendent of Schools, 4946 Berlin Ave., St. Louis.
F. D. Tharpe.
1884. Principal of Webster School, 3216 Anderson Ave., Kansas City.
1892. Richard Henry Jesse, LL.D., '91, Tulane Univ.
1891. President of University of State of Missouri, Columbia.
Mary Clifton McCulloch.
1880. Supervisor of Public Kindergartens, 3856 Washington Boul., St. Louis.
Florence McNeal.
1896. Teacher in Public Schools, 310 E. 10th St., Kansas City.
C. W. Robbins.
President, Central Business College, Massachusetts and 6th Sts., Sedalia.
1893. James Underwood Barnard.
1897. Principal of Webster School, 3038 E. 7th St., Kansas City.
O. M. Wood.
1883. Principal of L'Ouverture School, 3016 Caroline St., St. Louis.
1894. George Victor Buchanan, A.M., '94, McKendree Coll., Ill.
1893. Superintendent of Schools, 614 W. 7th St., Sedalia.
Edwin D. Luckey, B.S.D., '87, State Normal School, Kirksville, Mo.
1893. Principal Elleardville School, 1332 Union Boul., St. Louis.
Mrs. Mary V. Neet.
1898. Director of Study Hall, State Normal School, Warrensburg.
1895. William H. Black, A.M., '76, Waynesburg Coll.; D.D., '88, Cumberland Univ.
1889. President of Missouri Valley College, 312 College Ave., Marshall.
Ira I. Cammack, B.S., '84, Earlham Coll., Ind.
1897. Vice-Principal Central High School, 528 Chestnut Ave., Kansas City.
Sarah Elizabeth Crouch.
1890. Teacher in Longfellow School, 2910 Tracy Ave., Kansas City.
Arthur A. Dodd, M.S.D., '86, State Normal School, Warrensburg, Mo.; B.S., '95, Harvard.
1896. Dir. of Math. Course, Man. Train. High School, 1203 Springfield Ave., Kansas City.
Mary Gilday.
Teacher in Jefferson School, 1403 Wabash Ave., Kansas City.
William Henry Lynch, A.B., A.M., '68, Univ. of Missouri.
1898. Superintendent of Public Schools, Mountain Grove.
Richard C. Norton, A.M., LL.D.
1893. Department of Didactics, State Normal School, Kirksville.
Josephine Norville.
Chair of English, High School, 336 E. Webster St., Chillicothe.
Charles B. Reynolds.
1881. Superintendent of Schools, 321 Wabash Ave., Kansas City.
Louis Theilmann, B.S., '85, M.S., '90, Missouri Univ.
1888. Associate Principal of Academy, Appleton City.
Marie L. Turner.
1891. Principal of Public School, Clayton.
University of the State of Missouri.
President, R. H. Jesse; Secretary, J. G. Babb; Librarian, W. K. Stone, Columbia
John A. Whiteford, M.S.D., '93, State Nor. Sch., Kirksville.
1895. Superintendent of City Schools, 835 W. Rollins St., Moberly.
1896. Amelia C. Fruchte.
First Assistant Normal and High School, 4296 Washington Ave., St. Louis.
Josephine Heermans.
1891. Principal Whittier School, 1803 E. 7th St., Kansas City.
A. Isabel Mulford, A.M., Ph.D.
1898. Teacher of Botany, High School, Missouri Botanical Gardens, St. Louis.
Ophelia A. Parrish.
1896. Assist. Superintendent of Schools, 748 N. Main St., Springfield.
1897. Z. R. Ashbaugh, Grad., '72, Hillsdale Coll., Mich.
1898. Agent for American Book Co., Midland Hotel, Kansas City.
S. M. Barrett.
Superintendent of Schools, 423 N. Pleasant St., Independence.
Benjamin Blewett, A.B., '76, A.M., '79, Washington Univ.
1897. Assistant Superintendent of Schools, 9th and Locust Sts., St. Louis.
John S. Collins, A.B., '72, Univ. of Miss.
Principal Divall School, St. Louis; Kirkwood.
W. D. Dobson, LL.D.
President of State Normal School, 315 E. Jefferson St., Kirksville.
R. S. Douglas.
1896. Principal of High School, Malden.
Grace Geary.
1896. Teacher in Superior Normal School, 1515 Campbell St., Kansas City.

MISSOURI—*Continued*

1897. Peter Herzog.
Principal Blair School, St. Louis.
Benjamin F. Hoffman, A.M., '88, Univ. of Mo.
1895. Professor of German, University of Missouri, Columbia.
G. B. Longan.
1880. Principal of Schools, 1517 Michigan Ave., Kansas City.
Mrs. Sallie C. Maguire.
1887. First Assistant, Lincoln School, 912 E. 10th St., Kansas City.
John S. McGhee, A.M.
President State Normal School Board, Cape Girardeau.
James A. Merrill, B.S., '93, Harvard.
Teacher of Natural Sciences, Manual Training School, Kansas City.
Sarah J. Milligan.
1888. Principal of Public School, Webster Groves.
Alex H. Noel.
1883. Principal of Laclede School, 1518 S. Broadway, St. Louis.
Ermine Owen.
Teacher in Normal School, Kirksville.
H. W. Prentis.
3968 W. Bell St., St. Louis.
L. A. Wirick.
1895. Superintendent of Schools, 312 Macon St., Brookfield.
1898. G. W. Armstrong, B.S., '71, Eureka Coll., Ill.
1894. Principal of Bryant School, 2304 Lydia Ave., Kansas City.
William Prentice Evans, A.B., '84, Washington Univ.
1893. Principal Lafayette School, 6437 Virginia Ave., St. Louis.
George Henry Howe, Ph.B., '86, A.M., '89, Ill. Wes. Univ.
1898. Acting President State Normal School, 204 Tyler Ave., Warrensburg.
Isaac H. Hughes, LL.B., '89, Cumberland Univ.; B.C., B.S., '95, Nat. Nor. Univ.; Pd.M., '97 Nor. Sch., New Mex.; A.M., '97, Nat. Nor. Univ.
1898. Superintendent of Schools and Principal of High School, Bloomfield.
G. W. Krall, B.S., Millersville Nor. Sch., Pa.
Teacher, Manual Training School, St. Louis.
William Campbell Ridgeway.
1898. Principal Scarritt School, 3035 E. 7th St., Kansas City.
C. C. Thudium, A.M., M.S., O. Nor. Univ.
Superintendent of Schools, Hermann.

MONTANA

LIFE MEMBER

1886. J. E. Klock.
1896. Superintendent of Schools, 703, 5th Ave., Helena.

ACTIVE MEMBERS

1889. Everett E. Paxson.
821 W. Granite St., Butte.
1892. Oscar J. Craig, A.M., De Pauw Univ.; Ph.D., Wooster Univ.
President of University of Montana, 318 W. 2d St., Missoula.
1895. James M. Hamilton, M.S., '90, Union Christian Coll.
1889. Superintendent of Schools, Missoula.
W. H. Johnson, A.M., '90, Univ. of Kansas.
1896. Principal of High School, 819, 8th Ave., Helena
James Reid, A.B., '81, McGill Coll.
President of Montana College of A. and M. Arts, Bozeman.
Cynthia Elizabeth Reiley.
Professor of Mathematics, University of Montana, Missoula.
D. E. Sanders, A.M., '97, Kan. Nor. Coll.
1897. President State Normal School, Dillon.
1896. E. A. Steere, B.S., '81, M.S., '95, Univ. of Wisconsin.
1898. Superintendent of City Schools, Kalispell.
1897. E. A. Carleton.
State Superintendent of Public Instruction, Helena.
Mrs. M. S. Cummins, A. F. Seminary, Staunton, Va.
Ex-Professor of Modern Languages and Latin, Wesleyan University, Helena.
Frank C. Patten.
Librarian, Public Library, Helena.
Mrs. Laura Zook.
Superintendent of Custer County, Miles City.
1898. J. P. Hendricks.
Superintendent of Schools, 411 W. Quartz St., Butte.

NEBRASKA

LIFE MEMBERS

1876. S. DeWitt Beals.
Teacher, and Librarian of High School, 2118 Davenport St., Omaha.
1880. Mrs. Grace B. Sudborough.
549 S. 26th Ave., Omaha.
1884. Robert Curry, A.B., '48, A.M., '51, Jefferson Coll.; Ph.D., '73, Washington and Jefferson Coll.
Palmyra.
1886. J. H. Miller.
1890. Editor and Publisher "Northwestern Monthly," Lincoln.

ACTIVE MEMBERS

1890. Lizzie L. Banker.
1890. Principal of Central Park School, 4736 N. 39th St., Omaha.

NEBRASKA—*Continued*

1890. C. G. PEARSE.
1895. Superintendent of Schools, 508 City Hall, Omaha.
1892. W. K. FOWLER.
1893. Superintendent of Schools, Blair.
1893. A. WELLINGTON NORTON, A.B., '73, A.M., '76, Rochester Univ.
1898. Chair of Pedagogy, Normal University, Lincoln.
1894. D. C. O'CONNOR, A.B., '89, A.M., '93, Allegheny Coll., Meadville, Pa.
1892. Superintendent of Schools, Norfolk.
ANNA TIBBETS.
1892. Principal of Grammar School, 658 S. 17th St., Lincoln.
1895. CHARLES EDWIN BESSEY, B.S., '69, M.S., '72, Mich. Agri. Coll.; Ph.D., '79, Univ. of Iowa; LL.D. '98, Iowa Coll.
1884. Professor of Botany, the University of Nebraska, 1504 S St., Lincoln.
EDWIN J. BODWELL, B.S., '88, Dartmouth Coll.
Superintendent of Schools, Douglas Co., Court House, Omaha.
W. A. CLARK, A.B., '72, A.M., '85, Pd.D., '94, National Normal Univ.
1895. Psychology and History of Education, State Normal School, Peru.
JAMES W. CRABTREE, B.S., '90, Bloomfield Sci. Inst.
1897. Inspector of Nebraska High Schools, 1900 T St., Lincoln.
IRWEN LEVISTON, A.B., '82, A.M., '88, Dartmouth Coll.
1896. Principal of High School, 312 N. 21st St., Omaha.
G. W. A. LUCKEY, A.B., '94, Stanford Univ.
1895. Professor of Pedagogy, University of Nebraska, 1542 P St., Lincoln.
JENNIE L. REDFIELD.
Principal Lincoln School, 1826 N. 18th St., Omaha.
A. A. REED, A.B., Univ. of Neb.
1893. Superintendent of Schools, Crete.
*W. H. SKINNER.
1893. Superintendent of Schools, 319 N. 11th St., Nebraska City.
EMMA WHEATLEY.
Principal Mason School, 2539 Capitol Ave., Omaha.
KATE M. WICKHAM.
Teacher in Windsor School, 34th and Martha Sts., Omaha.
WILLIAM J. WILLIAMS, B.S., '71, A.B., '71, A.M., '74, Denison Univ.
1894. Superintendent of Schools, 510, 14th St., Columbus.
1896. HOWARD WALTER CALDWELL, Ph.B., '80, A.M., '93, Univ. of Neb.
1892. Professor of Am. Hist. and Civics, Univ. of Neb., 511 N. 16th St., Lincoln.
H. E. DAWES, B.S., A.M., North Western Normal.
1897. Superintendent of Nebraska School for the Deaf, Omaha.
J. G. HAUPT.
1898. Principal of Public Schools, Laurel.
ALICE E. HITTE.
Supervisor of Drawing, 212 S. 25th St., Omaha.
WILLIAM R. JACKSON.
1897. State Superintendent of Public Instruction, 1909 G St., Lincoln.
J. F. SAYLOR, B.S., '82, Iowa Agri. Coll.
1895. Superintendent of City Schools, 1226 D St., Lincoln.
A. H. WATERHOUSE.
1896. Principal of High School, Grand Island.
HARRY KIRKE WOLFE, A.B., '80, Univ. of Neb.; A.M., Ph.D., '86, Leipzig.
1898. Superintendent of Public Schools, South Omaha.
1897. S. P. ARNOT.
1896. Superintendent of City Schools, Harvard.
KATE L. BROWN.
1896. Principal of Schools, 324 S. 26th St., Omaha.
G. F. BURKETT.
1895. Superintendent of Schools, Schuyler.
GEORGE L. FARLEY.
County Superintendent of Schools, Plattsmouth.
ANNA FOOS.
Principal of Schools, The Madison, Omaha.
NORA H. LEMON.
Principal of Lothrop School, 1518 N. 26th St., Omaha.
GEORGE E. MACLEAN, A.B., A.M., LL.D., Williams; B.D., Yale; Ph.D., Leipzig.
1895. Chancellor, The University of Nebraska, Lincoln.
UNIVERSITY OF OMAHA.
President, David R. Kerr. Bellevue.
HENRY BALDWIN WARD, A.B., '85, Williams; A.M., Ph.D., '92, Harvard.
1893. Professor of Zoölogy, University of Nebraska, Lincoln.
1898. ALLEN C. FLING, A.B., '94. A.M., '98, Univ. of Neb.
1898. Superintendent of City Schools, 115 N. 11th St., Nebraska City.
J. IRVING READ, A.B., '94, Dartmouth.
Instructor in Latin and English, High School, 2615 Capitol Ave., Omaha.
UNIVERSITY OF NEBRASKA.
Chancellor, George Edwin MacLean; Librarian, J. O. Wyer, Jr., Lincoln.

NEVADA

ACTIVE MEMBERS

1895. WALTER C. GAYHART, C.E.
1894. Principal of High School and Public Schools, Austin.
J. E. STUBBS, A.B., '73, A.M., '76, D.D., '90.
1894. President of State University of Nevada, Reno.

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*Died September, 1898.

NEW JERSEY

LIFE MEMBER

1876. Langdon Shook Thompson, A.M., '84, Marietta Coll., O.; Pd.D., '91, Univ. of the City of New York.
1889. Supervisor of Drawing, Public Schools; 1893, Principal Metropolitan Normal Art School, 12 Park St., Jersey City.

ACTIVE MEMBERS

1889. A. W. Moon, A.B., '95, Indiana Univ.
1897. Principal of School No. 2, Pleasantville.
1890. Levi Seeley, A.M., '83, Williams Coll.; Ph.D., '86, Leipzig.
1895. Professor of Pedagogy, State Normal School, 482 W. State St., Trenton.
1891. Augustus Scarlett.
1863. Principal of South 8th St. School, 56 S. 11th St., Newark.
1892. Sarah Y. Ely.
1887. Supervisor in High and Grammar Departments of State Model School, 46 Carroll St., Trenton.
James M. Green, A.M., '84, Dickinson Coll.; Ph.D., '90, Ill. Wesleyan Univ.
1889. Principal of State Normal and Model Schools, Trenton.
M. H. Kinsley, B.S., '88, St. Lawrence Univ.
1895. Superintendent of Schools of Kearney, Belgrove Drive, Arlington.
Jane M. Lewis.
1865. Principal of Primary School No. 8, 99 Mercer St., Jersey City.
S. E. Manness, A.M., '96, Univ. of Tenn.
1890. Supervising Principal 1st District, 425 Chambers Ave., Camden.
Bryon C. Mathews, A.B., '77, A.M., '92, Ph.D., '93, Syracuse Univ.
1885. Instructor in Greek and Economics, High School, 36 Kearney St., Newark.
Henry M. Maxson, A.M., '80, Amherst Coll.
1892. Superintendent of Schools, 439 W. 6th St., Plainfield.
Addison B. Poland, A.M., '76, Wes. Univ., Conn.; Ph.D., '90, Univ. of City of N. Y.
1897. Superintendent of Schools, City Hall, Paterson.
James M. Ralston, A.M., '82, Dickinson Coll.
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1898. Vice-Principal N. J. Training School for Feeble-Minded, Vineland.
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Miss Jean Cox.
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*Died May 9, 1898.

† Died July 17, 1898.

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George M. Plumer.
Principal of Ward School, 623, 4th St., Marietta.
*Wilbur V. Rood, A.B., '73, A.M., '76, Oberlin Coll.
1880. Principal of High School, 113 Adolph Ave., Akron.
S. L. Rose.
1895. Superintendent of Schools, 219 N. 2d St., Hamilton.
John H. Rowland, A.M.
General Agent, American Book Co., 240 N. Main St., Delaware.
Joseph H. Snyder, A.M., Heidelberg Coll., O.
1890. Superintendent of Schools, 169 Monroe St., Tiffin.
Mary E. Stockleman.
Buchtel College, Akron.
Harriet E. Terrel.
1890. Principal of Scranton Schools, 381 Jennings Ave., Cleveland.
R. S. Thomas, Ph.B., Madison Univ.; Ph.D., '98, Mt. Hope Coll.
1898. Superintendent of Schools, 210 N. Prospect St., Akron.
Anna M. P. Tucker.
Principal of Anna M. P. Tucker School of Ethical and Physical Culture, 878 Case Ave., Cleveland.
Charles Liggett Van Cleve, A.B., A.M., O. Wes. Univ., Delaware.
Superintendent of Public Schools, Troy.
William M. White, A.B., McNeely Nor. Sch.
1868. Superintendent Union Schools, Mt. Pleasant.
Ida M. Windgate, A.B.; O. W. Univ.
Principal High School, Delaware.
1897. Ella Beistle.
1888. Principal 10th District, 31 E. McOwen St., Dayton.
Charlotte J. Caldwell.
Station K, Cincinnati.
Cleveland Public Library.
President, John C. Hutchins; Librarian, William H. Brett, Cleveland.
Cora M. Gayer.
Special Teacher of German, 135 Miles Ave., Cleveland.
Isabella A. Kolbe,
Norwood Public School Teacher, 1891 Walker St., Cincinnati.
Rose Morrison.
1894. Teacher in Normal School, 257 Kennard St., Cleveland.
Ohio State University Library.
President, James H. Canfield; Librarian, Olive Jones, Columbus.
Mabel L. Pray.
Director of Physical Training, 1727 Summit Ave., Toledo.
John C. Ridge.
1877. With the American Book Co., 2322 Nelson Ave., Mt. Auburn, Cincinnati

* Died June 21, 1898.

OHIO—*Continued*

1897. Sylvester Scovel, A.B., '53, A.M., '56, Hanover.
1898. Ex-President and Professor of Morals and Sociology, University of Wooster, Wooster.
Julia C. Silcox.
Teacher in 8th Grade, 137 Miles Ave., Cleveland.
Edward M. Van Cleve, A.B., '86, A.M., '89, Ohio Wes. Univ.
1892. Superintendent of Schools, Barnesville.
Mary-Belle Westfall.
Principal 11th District, Dayton.
1898. Perla G. Bowman.
1897. Associate Professor Domestic Science, Ohio State University, Hayes Hall, Columbus.
Robert Brown Ewing, B.S., '85, Nat. Nor., Lebanon, O.
1895. Superintendent of Schools, Gallipolis.
Harvey V. Merrick, A.B., '80, A.M., '83, Mt. Union Coll.
1888. Superintendent of Schools, Cadiz.
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1897. Superintendent of Schools, Camden.
P. N. Sigler.
1897. Member of Board of Education, 424 Grand Ave., Dayton.
J. F. Smith, A.B., '85, A.M., '90, Kenyon.
1888. Principal High School, 130 Hancock St., Findley.
Ralph Richard Upton, A.B., Yale; LL.B., LL.M., Columbian.
1898. Principal High School, Chillicothe.
Isaac Newton Van Tassel.
Superintendent of Schools, 33 N. Prospect St., Bowling Green.
Mary Walter.
Primary Teacher, Public Schools, Pomeroy.
Miss M. A. Woodmansee.
205 N. Broadway, Dayton.

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1892. President of University of Oklahoma, Norman.
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1898. L. W. Cole, B.Pd., S. W. Kan. Coll.
1897. Superintendent of Schools, El Reno.
S. N. Hopkins.
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President Territorial Normal School of Oklahoma, Edmond.

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1895. Professor of Ethics, University of Oregon, Eugene.
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1887. Principal Pennsylvania First State Normal School, Millersville.

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1888. Supervising Principal of Boys' Grammar School, 3746 Powelton Ave., Philadelphia.
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1893. State Superintendent of Public Instruction, Harrisburg.
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1896. Boys' High School, Reading.
1892. Eliza A. Bishop.
211 Pine St., Harrisburg.
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1880. Superintendent of Schools, 408 Manor St., Lancaster.
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1891. Professor of Psychology and Pedagogy, Keystone State Normal School, Kutztown.
Mrs. Constance Mackenzie Durham.
Formerly Director of Public Kindergartens, 4816 Florence Ave., Philadelphia.
H. W. Fisher, Grad. State Nor. Sch., Millersville, Pa.
1875. Supervisor 17th Ward Schools, 350 Lehigh Ave., Pittsburgh.
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1872. Superintendent of Schools, 19 E. Chestnut St., Norristown.
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1891. Supervising Principal of George W. Childs School, 4403 Osage Ave., West Philadelphia.
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Principal of High School, 324 Cattell St., Easton.
Herman T. Lukens, A.M., '85, Univ. of Pa.; Ph.D., '91, Jena.
1898. Head Training Teacher, State Normal School, California.
John A. M. Passmore, M.S., '62, State Nor. Sch., Millersville, Pa.
1890. Agent American Book Co., 318 S. 42d St., Philadelphia.
S. C. Schmucker, A.M., '85, M.S., '90, Muhlenberg Coll., Pa.; Ph.D., '93, Univ. of Pa.
Professor of Biological Sciences, State Normal School, 610 S. High St., West Chester.
H. H. Spayd.
1883. Principal of Public Schools, P. O. Box 310, Minersville.
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1884. Director of Industrial Art School, 319 N. 32d St., Philadelphia.
1893. C. A. Babcock, A.M., '71, LL.B., '83, Hamilton Coll.
1883. Superintendent of Schools, 313 Petroleum St., Oil City.
M. G. Brumbaugh, A.M., '93, Ph.D., '94, Univ. of Pa.
1893. President of Juniata College, and (1894) Professor of Pedagogy, University of Pennsylvania, 311 S. 40th St., Philadelphia.
James A. Dewey, M.E., '84, State Nor. Sch., Mansfield.
1890. Superintendent of Schools, Newport Township, Wanamie.
Loyal Freeman Hall, M.E.D., State Nor. Sch., Indiana, Pa.
Principal of First Ward Schools, Springdale and McKean Sts., Butler.
William Henry Samuel, Ph.D., '92, Univ. of Pa.
1878. Supervising Principal Public Schools, 2505 N. 12th St., Philadelphia.
Andrew Thomas Smith, Pd.D., '93, School of Pedagogy, Univ. of N. Y.
1885. Professor of Pedagogy, State Normal School, West Chester.
Pauline W. Spencer.
1893. Teacher of Literature, Girls' Normal School, 3421 Race St., Philadelphia.
1894. Emma J. Longstreth, M.E., '76, State Nor. Sch., West Chester, Pa.
1894. Teacher of History, Girls' High School, 1416 Euclid Ave., Philadelphia.
Miss M. J. McCracken.
1887. Assistant Principal, Franklin School, 4632 Center Ave., Pittsburgh.
Franklin B. Sawvel, A.M., Hopedale Coll.; Ph.D., '86, Wittenberg Coll.
1890. Professor of English Literature and Philosophy, Thiel College, Greenville.
*James F. C. Sickel.
1883. Assistant Superintendent of Schools, 637 N. 40th St., Philadelphia.
Henry T. Spangler, A.B., '73, A.M., '76, Ursinus Coll.; D.D., '94, Heidelberg Univ., O.
1893. President Ursinus College, Collegeville.
Charles K. Witmer, A.B., '88, A.M., '91, Franklin and Marshall Coll.
1893. Principal of High School, United States Hotel, Lebanon.
1895. S. H. Albro, Ph.D., Colgate Univ.
Principal of State Normal School, Mansfield.
A. D. Colegrove, A.M., '84, Allegheny Coll.
1883. Superintendent of City Schools, 73 Euclid St., Corry.

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*Died September, 1898.

1895. W. G. Gans.
1898. Principal of Union High School, Turtle Creek; East Pittsburg.
Mary Heins, B.E., '87, Keystone Nor. Sch., Kutztown.
1887. Teacher in Public Schools, Eshbach.
James Mac Alister, A.M., LL.D., Brown Univ.; LL.B., Univ. of N. Y.; Officier d'Académie, Paris.
1890. President of Drexel Institute, Philadelphia.
Mrs. Mary E. Mumford.
Member of Board of Public Education, 1401 N. 17th St., Philadelphia.
B. F. Patterson.
Superintendent of Schools, 111 George St., Pottsville.
Thed Pershing, A.B., Princeton.
Representative of Publishing House of Ginn & Co., 1229 Arch St., Philadelphia.
Rev. J. W. Shanahan.
1894. Superintendent of Parochial Schools, 48th St. and Lancaster Ave., Philadelphia.
Sydney T. Skidmore, A.M., '85, Amherst Coll.
1893. Professor of Natural Sciences, Normal School, 1706 N. 18th St., Philadelphia.
H. M. Trask.
Agent for Silver, Burdette & Co., 1328 Arch St., Philadelphia.
1896. J. George Becht, M.S., Lafayette Coll.
1893. Superintendent of Schools, Lycoming County, Muncy.
R. M. Cargo.
1868. Principal Mt. Washington School, 127 Sycamore St., Pittsburgh.
Watson Cornell.
Supervising Principal Logan Grammar School, 1725 N. 16th St., Philadelphia.
L. O. Fouse, A.M., '78, Penn. Coll., Gettysburg.
1879. Superintendent of City Schools, 123 Chestnut St., Harrisburg.
John Arthur Gibson, A.B., '91, Allegheny Coll.
1896. Superintendent of Schools, 418 N. McKean St., Butler.
George Howell.
Superintendent of Schools, 1007 Scranton St., Scranton.
W. L. MacGowan, A.B., Allegheny Coll.; Ph.B. and Ph.M.
1890. Superintendent of Schools; office, East St. Building, Warren.
C. B. McCabe.
Principal of North Braddock Borough Schools, 1019 Halkett Ave., Braddock.
S. R. McClure, A.M., '94, Ph.D., '97, Grove City Coll.
1893. Principal of High School, 616 Jones Ave., North Braddock.
Theodore B. Noss, A.M., '82, Ph.D., '83, Syracuse Univ.
1883. Principal of State Normal School, California.
W. Riddle.
Educational Author, 314 N. Lime St., Lancaster.
J. N. Smith.
1875. Principal of 6th Ward School, 18 Franklin St., Allegheny City.
Judson Perry Welsh, A.M., '84, Ph.D., '93, Lafayette Coll., Easton, Pa.
1890. Principal of State Normal School, Bloomsburg.
Margaret Catharine Zillafro, M.E.D., State Nor. Sch., Edinboro.
1893. Primary Teacher, 4th Ward Schools, 56 Kennedy St., Bradford.
1897. Francis Burke Brandt, A.B., '92, Harvard; Ph.D., '95, Columbia.
1896. Professor of Pedagogy, Central High School, 1637 S. 15th St., Philadelphia.
C. E. Ehinger, M.D.
Physical Director State Normal School, 15 Normal Ave., West Chester.
The Free Library of Philadelphia.
Librarian, John Thomson, 1217-1221 Chestnut St., Philadelphia.
Henry Houck.
Deputy State Superintendent, Harrisburg.
N. P. McNelis.
Inspector of Parochial Schools, St. Bernard's Church, Indiana.
State Normal School at Millersville.
Principal, E. Oram Lyte, Millersville.
State Normal School Library, Mansfield.
Principal, S. A. Albro, Mansfield.
1898. D. H. Bergey, A.M., Ill. Wes. Univ.; M.D., Univ. of Va.; B.S., Univ. of Pa.
1895. First Assistant, Laboratory of Hygiene, University of Virginia, 34th and Locust Sts., Philadelphia.
Anna Bodler, M.S., '95, Mansfield, Pa., State Nor. Sch.
1893. Superintendent of Schools of Potter County, Coudersport.
A. J. Davis, M.S.
1887. Principal State Normal School, Clarion, Pa.
Franklin Spencer Edmonds, A.M., Cen. H. S., Philadelphia; Ph.B., Univ. of Pa.
Assistant Professor of Political Science, Central High School, 1538 Centennial Ave., Philadelphia.
J. R. Flickinger, A.B., '77, A.M., '80, Princeton.
1896. Principal State Normal School, Edinboro.
H. W. Golden, B.Didac., '90, M.Didac., '92, Edinboro State Normal.
1897. Principal 5th Ward Public Schools, Allegheny City; 8 Dawson Ave., Bellevue.
John W. Lansinger.
State Normal School, Millersville.
William A. Mason.
1892. Director of Drawing in Schools, 212 W. Chelton Ave., Germantown.
Jesse H. Michener, Ph.D., Univ. of Pa.
Principal Grammar School, 4512 Regent St., Philadelphia.
Rev. Eugene Murphy.
Director of St. John the Baptist Parochial School, 146 Rector St., Manayunk, Philadelphia.
William Smith Murray, B.S., '88, M.S., '93, Syracuse Univ.
Principal of Graded and High School, Troy, Bradford Co.
R. H. Pratt, Major U. S. A.; LL.D., '98, Dickinson Coll.
Superintendent Indian Industrial School, Carlisle.

PENNSYLVANIA — *Continued*

1898. Eli M. Rapp.
Superintendent of Berks County Schools, 115, 4th St., Hamburg.

Edward Weldon.
1898. President Bethlehem Borough School Board, 127 Wall St., Bethlehem.

Lightner Witmer, Ph.D., '91, Leipzig, Germany.
1893. Professor of Psychology, University of Pennsylvania, Philadelphia.

RHODE ISLAND

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719–721 Industrial Trust Building, Providence.

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1875. Commissioner of Public Schools, Box 1432, Providence.

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1884. Superintendent of Schools, 169 Power St., Providence.

1892. Benjamin Baker, A.M., '78, Brown Univ.
1890. Superintendent of Schools, 10 Mt. Vernon Court, Newport.

George E. Church, A.B., '72, A.M., '78, Amherst Coll.
1889. Principal Peace Street Grammar School, 37 Adelaide St., Providence.

Gilman C. Fisher, A.B., '69, A.M., '86, Colby Univ.
1892. Superintendent of Schools, 110 Central Ave., Pawtucket.

1894. Walter Ballou Jacobs, A.M., '85, Brown Univ.
1895. Associate Professor of Pedagogy, Brown University, 362 Point St., Providence.

Abby L. Marlatt, B.S., '88, M.S., '90, State Agri. Coll., Kan.
1894. Teacher of Domestic Science Manual Training, High School, 261 Benefit St., Providence.

1896. Victor Frazee, A.B., '89, Dalhousie Coll., Halifax.
1893. Teacher in East Side High School, 98 Prospect St., Providence.

Henry Dwight Hervey, A.B., '89, A.M., '96, Denison Univ., Granville, O.
1898. Superintendent of Schools, 80 Lyon St., Pawtucket.

Ellen Le Garde.
1893. Physical Director of Schools, 10 Mawney St., Providence.

Mrs. Ella M. Pierce.
1891. Supervisor of Grammar and Primary Schools, 19 Lester St., Providence.

Bessie M. Scholfield.
Supervisor of Primary Work in Public Schools, 83 Vernon St., Providence.

W. R. Whittle, A.B., '83, A.M., '88, Colby Univ.
1891. Principal of Schools, 56 Elm St., Westerly.

1897. The Rhode Island Normal School.
Principal, Fred Gowing, Providence.

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1868. Founder and General Manager of Schofield Normal and Industrial School, Aiken.

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1895. Superintendent of Schools, Columbia.

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1893. Superintendent of City Schools, Chester.

1897. C. A. Graeser, A.M., Charleston Coll.
1898. Superintendent of Schools, Bennettsville.

1898. J. Frank Fooshe.
1897. Superintendent of Schools, Blackville.

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1892. Principal Brainerd Institute, P. O. Box 235, Chester.

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1890. William H. H. Beadle, A.B., '61, A.M., '64, LL.B., '67, Univ. of Mich.
1889. President of State Normal School, Madison.

1894. Mattie Jones.
Teacher in Indian Industrial School, Flandreau.

Kate Taubman.
1895. Principal of High School, 514 S. Jay St., Aberdeen.

1895. Frank Crane, B.S., Galesville Univ.
Superintendent of Public Instruction, Pierre.

Anna B. Herrig, Grad. Oswego Normal School.
1898. Superintendent, Training Department, State Normal School, Madison.

George M. Smith, A.B., '73, A.M., '77, Colby Univ.
Professor of Greek and Pedagogy, University of South Dakota, Vermillion.

Edmund J. Vert, Pd.D., '94, Ph.B., '96.
1895. Superintendent of Schools, 502 Lynn St., Yankton.

SOUTH DAKOTA—*Continued*

1896. A. H. Avery.
1894. Principal Public Schools, Woonsocket.
1897. Alexander Strachan, A.M., '82, Univ. of Rochester.
Superintendent of Schools, 71 Forest Ave., Deadwood.

TENNESSEE

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1895. Professor of American History, Peabody Normal College, 813 S. Summer St., Nashville.
1889. Board of Education of Nashville.
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1887. Wharton Stewart Jones, A.B., '73, Kentucky Univ.
1881. Principal of Memphis Institute, 501 Vance St., Memphis.
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1885. Principal of Girls' High School, 508 Broad St., Knoxville.
1892. William H. Payne, LL.D., Univ. of Mich.; Ph.D., Univ. of Nashville.
Chancellor of University of Nashville and President of Peabody Normal College, 16 Lindsley Ave., Nashville.
1894. A. T. Barrett, LL.D., '81, S. W. Univ.
1891. Superintendent of City Schools, 1001 E. 9th St., Chattanooga.
1895. John Braden, A.B., A.M., Ohio Wesleyan Univ.; D.D., Iowa Wes. Univ.
1867. President of Central Tennessee College, 82 Maple St., Nashville.
1896. James A. Henry, A.B., '83, Atlanta Univ.
1886. Principal of High School, 207 Grove St., Chattanooga.
1897. James C. Blasingame, A.B., Univ. of Ga.
President Holbrook Normal College, Fountain City.
J. M. Guilliams, A.B., Central Nor. Coll.; A.M., '98.
1898. Professor of English Grammar and History, Holbrook Normal College, Fountain City.
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Superintendent of Schools, 233 Deaderick St., Knoxville.
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1897. Superintendent of Schools, cor. Broad and Spruce Sts., Nashville.
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1892. Secretary and Treasurer of Peabody Normal College; 1895, Secretary Board of Education, City of Nashville, 16 Lindsley Ave., Nashville.

TEXAS

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Professor of Pedagogy, University of Texas, 1801 Congress Ave., Austin.
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1891. Principal of Sam. Houston Normal Institute, Huntsville.
1894. Oscar Henry Cooper, A.B., '72, Yale; A.M., LL.D., '91, Univ. of Nashville.
Carthage.
A. H. Wilkins.
Representative of American Book Co., 418 Main St., Dallas.
1895. D. S. Bodenhamer, A.B., '70, A.M., '73, B.D., '74, Ph.D., '84, C.E., '92, Cumberland Univ.
Professor of Mathematics, Trinity University, Tehuacana.
James M. Carlisle, A.B., '98, Cumberland Univ.; A.M., '78, Emory Coll., Ga.; LL.D., '98, Univ. of Nashville.
1891. State Superintendent of Public Instruction, Austin.
J. M. Fendley, A.B., '82, Univ. of Nashville.
1885. County Superintendent and Principal of Avenue L School, 3202 Avenue N, Galveston.
T. G Harris, A.B., '76, A.M., '80, Carson Coll., Tenn.
1895. Superintendent of Schools, Austin.
H. S. Parsons, A.B., '86, N. Ind. Nor. Sch.
1896. Vice-President of Grayson College, Whitewright.
W. S. Sutton, A.M., '84, Arkansas Univ.
1897. Professor of Pedagogy, University of Texas, 1812 Congress Ave., Austin.
1896. J. L. Long.
Superintendent of Public Schools, High School, Dallas.
George Tayloe Winston, B.L., '74, Cornell; A.M., Davidson Coll.; LL.D., Trinity.
1896. President of University of Texas, Austin.
1897. Charles T. Alexander.
Superintendent of Schools, 1122 Columbus St., Waco.
N. J. Clancy, Grad. State Nor. Sch.
Superintendent of Schools, Mansfield.
C. E. Foster, B.S., E. Tex. Nor.
Principal of School, Handley.
John A. Moldstad, A.B., '94, Luther Coll., Decorah, Ia.
Principal of Lutheran College, Clifton.

TEXAS—*Continued*

1898. J. K. McBride, F.I., Peabody Nor. Coll.; A.B., '93, Univ. of Nashville.
Principal Salem School, Greenville.
R. E. Miller, A.B., Nat. Nor. Univ.
President of Jefferson Davis College and Superintendent of Schools, Pittsburg.

UTAH

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1892. Allen Allensworth, A.M.
1886. Superintendent of Schools, 23 Fountain Square, Fort Douglas.
1895. William Jasper Kerr, B.S., D.B.
1894. President of Brigham Young College, Logan.
J. F. Millspaugh, A.B., '89, Univ. of Mich.; M.D., '83, Univ. of Pa.
1890. Superintendent of Schools, 209, 13th East St., Salt Lake City.
University of Utah.
President, J. T. Kingsbury; Secretary, David R. Allen, Salt Lake City.
1896. M. Adelaide Holton.
1897. Supervisor Primary School, 6 Thornton Ave., Salt Lake City.
1897. A. O. Clark.
Principal of High School, 1c59, 3d St., Salt Lake City.
Joseph M. Tanner.
President of Agricultural College, Logan.

VERMONT

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Teachers' Examiner, Lunenburg.

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1896. Herbert J. Jones, Ph.B., '94, Cornell Univ.
1897 Superintendent of Schools, St. Johnsbury.

VIRGINIA

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1893. Superintendent of Schools, Staunton.
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1889. Superintendent of Schools, City Hall, Richmond.
E. C. Glass.
1893. Superintendent of Schools, 622 Madison St., Lynchburg.
Maximilian P. E. Groszmann, Pd.D., '93, New York Univ.
"Montebello," University of Virginia, Charlottesville.
1896. Albert H. Tuttle, M.S, '68, Penn. Coll.
1888. Professor of Biology, University of Virginia, 1 West Lawn, University of Virginia, Charlottesville.
1897. Celestia S. Parrish, Ph.B., '96, Cornell Univ.
1893. Professor of Mathematics and Pedagogy in Randolph Macon Woman's College, Lynchburg.
1898. Bessie Crawford Anderson.
16 S. Coulter St., Staunton.
M. M. Lynch.
Superintendent of Schools, Winchester.

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Urban, Sinclair Island.

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1898. President Washington State Normal School, Ellensburg.
1891. Frank J. Barnard.
1890. Superintendent of Schools, Seattle.
1895. J. T. Forrest, Ph.B., '83, Central Univ. of Iowa.
1885. Superintendent of Schools, Chehalis.
M. G. Royal, A.B., '75, A.M., '78, W. Univ., Salem, Ore.
Olympia.
1896. Reuben S. Bingham, A.B., A.M., Hamilton Coll.
1896. Superintendent of City Schools, 616 Tacoma Ave., Tacoma.
Charles F. Reeves, B.S., '78, M.S., '81, Pa. State Coll.
1894. Professor of Modern Languages, University of Washington, Seattle; residence Columbia City.

WASHINGTON—*Continued*

1897. State Normal School at Ellensburg.
President, W. E. Wilson, Ellensburg.
1898. O. C. Whitney, B.L., '96, Puget Sound Univ.
1895. Principal Bryant School, 704 S. I St., Tacoma.

WEST VIRGINIA

LIFE DIRECTOR

1877. T. Marcellus Marshall.
Glenville.

LIFE MEMBER

1870. William H. Cole, A.B., A.M., Ohio Wesleyan Univ.
1898. Superintendent of Schools, Huntington.

ACTIVE MEMBERS

1890. W. H. Anderson, A.M., '89, Bethany Coll.
1885. Superintendent of Schools, 45, 14th St., Wheeling.
1891. J. Walter Barnes, A.M., West Virginia Univ.
1892. Principal of State Normal School, Fairmont.
Byrd Prillerman, B.S., '89, Knoxville Coll.; A.M., '94, Westminster Coll.
1895. Professor of English Language, West Virginia Colored Institute, Charleston.
1894. Robert A. Armstrong, A.M., '90, West Virginia Univ.
1893. Professor of English Literature, and (1897) Vice-President, West Virginia University, Morgantown.
1895. D. M. Willis.
Principal Commercial Department, West Virginia University, Morgantown.
1896. J. N. Deahl, A.B., '93, Harvard.
Grafton.
Charles W. Evans.
1897. Superintendent of Schools, Walnut Ave., Fairmont.
Lucy Robinson.
Supervisor of Music, 36 Virginia St., Wheeling.
1897. George S. Laidley, A.B., West Va. Univ.
Superintendent of Schools, Charleston.
Frederic W. Sanders, A.B., '83, Coll. of City of N. Y.; A.M., '92, Harvard Univ.; Ph.D., '95 Univ. of Chicago.
1897. Assistant Professor of European History, West Virginia University, Morgantown.
J. R. Trotter, A.M., '96, Harvard.
State Superintendent of Free Schools, Charleston.

WISCONSIN

LIFE MEMBERS

1884. *George Sumner Albee, A.B., '64, Univ. of Mich.
1871. President of State Normal School, Oshkosh.
Alumni Association, State Normal School at Milwaukee.
President, Lutie E. Stearns; Secretary, Annette Rosenthal, Milwaukee.
John Arthur Aylward, B.A., '84; B.L. (Law), '90, Univ. of Wis.
Vilas Block, Madison.
George Beck, M.S., '63, Univ. of Mich.
514 N. Elm St., Platteville.
Beloit City School Board.
President, F. E. Converse; Secretary, A. N. Bort, Beloit.
Board of Education of the City of Janesville.
President, James Shearer; Clerk, Fred. L. Clemons, Janesville.
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President, J. J. Fruit; Secretary, John P. Bird, La Crosse.
Board of Education, Oshkosh.
President, J. Howard Jenkins; Clerk, Dan Witzel, Oshkosh.
Board of Education, Watertown.
Board of Regents, State Normal Schools.
President, A. E. Thompson, Oshkosh; Secretary, S. S. Rockwood, Portage.
Board of School Directors, Milwaukee.
President, Frank M. Hoyt, 222 Prospect Ave.; Secretary, Henry E. Legler, City Hall, Milwaukee.
City Superintendents' and Supervising Principals' Association of Wisconsin.
President, L. A. Williams, Fond du Lac; Secretary, J. H. Derse, Black River Falls,
Jairus Harolin Carpenter, A.M., '74, Yale; LL.D., '76, Univ. of Wis.
1868. Professor of Law, University of Wisconsin, 315 Wisconsin Ave., Madison.
Willard H. Chandler.
1895. State Inspector of High Schools, Madison
Lewis Herbert Clark.
1892. Professor of Mathematics, State Normal School, River Falls.
County Teachers' Association, Milwaukee County.
President, Herbert J. Piper, Bay View; Secretary, John E. Roch, S. Milwaukee.
Philip Eden, Ph.B., '72, Univ. of Wis.
601 Pine St., Platteville.
John Q. Emery, A.M., Ph.B.
1895. State Superintendent of Public Schools, Madison.

1884. John T. Flavin.
1874. County Superintendent of Schools of Dodge County, Watertown.

Lorenzo Dow Harvey, Ph.D., '91, Milton Coll.
1892. President of State Normal School, 225, 23d St., Milwaukee.

Andrew J. Hutton.
1879. Institute Conductor, State Normal School, 1105 Main St., Whitewater.

Charles H. Nye.
1893. County Superintendent of Schools of Grant County, 212 N. Adams St., Lancaster.

W. D. Parker, A.M., Univ. of Wis.
River Falls.

John Barber Parkinson, A.B., A.M., Univ. of Wis.
1885. Vice-President and (1867) Professor of Constitutional and International Law, University of Wisconsin, 803 State St., Madison.

Public School Teachers of Janesville.
Superintendent, D. D. Mayne; Secretary, Lizzie A. Paterson, Janesville.

Samuel Shaw, A.M., '75, Univ. of Wis.
District Attorney, Crandon, Forest Co.

Robert Closson Spencer.
1863. President of Spencerian Business College, Broadway and Wisconsin St., Milwaukee.

Joshua Stark, A.B., '48, Union Coll., Schenectady, N. Y.
355 Farwell Ave., Milwaukee.

State Historical Society of Wisconsin.
President, John Johnston, Milwaukee; Secretary, Reuben G. Thwaites, Madison; Librarian, Isaac S. Bradley, Madison.

State Normal School at Platteville.
President, Duncan McGregor; Secretary, Carol Goff, Platteville.

John William Stearns, A.B., '60, A.M., '64, Harvard; LL.D., '74, Chicago Univ.
1888. Professor of Philosophy and Pedagogy, and (1897) Director of School of Education, Univ. of Wis., 512 Wisconsin Ave., Madison.

I. N. Stewart, B.S., '62, Univ. of Wis.
Editor, Staff of Milwaukee "Daily Journal," Box 124, Milwaukee.

Teachers' Association of Wisconsin.
President, G. G. Williams, West Superior; Secretary, W. H. Cheever, Milwaukee.

Rev. William C. Whitford, A.B., '53, A.M., '58, Union Coll., N. Y.; D.D., '85, Blackburn Univ., Illinois.
1858. President of Milton College, Milton, Rock Co.

ACTIVE MEMBERS

1884. Mrs. Eva D. Kellogg.
Editor of "Primary Education," 237 Langdon St., Madison.

1887. Albert Salisbury, Ph.D., Milton Coll., Wis.
1885. President of State Normal School, Whitewater.

1889. Sanford A. Hooper, A.B., '72, A.M., '82, Beloit Coll.
1893. Principal South Side High School, Milwaukee.

1890. Judson E. Hoyt, A.B., '80, Univ. of Wis.
Superintendent of Schools, 512 Wilson Ave., Menomonie.

1891. Marie Doyle.
1894. Supervisor of Practice, State Normal School, West Superior.

1892. Mrs. Ella N. Allen.
1897. Supervisor of Practice, State Normal School, Platteville

I. C. McNeill.
1896. President State Normal School, West Superior.

Mrs. I. C. McNeill.
West Superior.

M. V. O'Shea, B.L., '92, Cornell.
1895. Professor of the Science and Art of Education, University of Wisconsin, 431 Lake St., Madison.

A. W. Tressler, A.B., '91, Univ. of Mich.
1898. Principal of Schools, Ripon.

1893. William George Bruce.
Editor of "American School Board Journal," 435 Hanover St., Milwaukee.

1894. Buel T. Davis.
1896. Superintendent of Schools, 71 Washington St., Oshkosh.

R. B. Dudgeon, A.B., '76, Univ. of Wis.
1891. Superintendent of Schools, 520 Jefferson St., Madison.

D. D. Mayne.
1893. Superintendent of Schools, 226 S. Main St., Janesville.

George P. Perry.
Principal of 7th District School, 1218 Caledonia St., La Crosse.

Theron B. Pray, A.M., '72, Univ. of Chicago.
President of State Normal School, 402 Pine St., Stevens' Point.

1895. G. L. Bowman.
1896. Teacher of Mathematics and Reading, State Normal School, 1713 Hughitt Ave., West Superior.

Warren J. Brier.
1898. President of State Normal School, River Falls.

C. E. Brown.
1034 Spaight St., Madison.

C. R. Cross.
Superintendent of Schools, Oconomowoc.

W. H. Elson, A.B., Univ. of Ind.
Superintendent of Schools, West Superior.

Silas Y. Gillan, A.M., '87, Ill. Wesleyan Univ.
1892. Editor "Western Teacher," 141 Wisconsin St., Milwaukee.

Jonathan Piper, A.B., Iowa State Univ.; A.M., Bowdoin Coll.
Institute Instructor, Honey Creek.

1895. Ellen C. Sabin, A.M., '95, Univ. of Wis.
1895. President of Milwaukee-Downer College, 614 Milwaukee St., Milwaukee.
H. O. R. Siefert.
1896. Superintendent of Schools, City Hall, Milwaukee.
H. A. Simonds, A.B., '83, A.M., '86, Amherst Coll.
1890. Superintendent of Schools and Principal High School, 934 Clark St., Stevens' Point.
Carrie J. Smith.
1894. Instructor in General History and English, State Normal School, River Falls.
Rose C. Swart, A.M., '95, Univ. of Wis.
1884. Inspector of Practice Teaching, State Normal School, 37 Elm St., Oshkosh.
Samuel B. Todd, Ph.B.
1 E. Main St., Madison.
E. V. Wernick.
1895. President of Board of Education, Hillsboro.
Charles F. A. Zimmerman, Ph.B., '96, Ill. Wes. Univ.; A.M., '96, Charles City Coll.
1888. Principal of 17th District School, 622 Otjen St., Milwaukee.
1896. Walter Allen.
1882. Principal 12th District School, 502 Greenbush St., Milwaukee.
William H. Beach.
Professor of History and Civics, East Side High School, 229 Pleasant St., Milwaukee.
William O. Brown.
1894. Principal of East Side High School, 414 Stewart St., Green Bay.
Arthur Burch.
Assistant Superintendent of Public Schools, 116, 32d St., Milwaukee.
W. H. Cheever.
1893. State Institute Conductor, 229, 23d St., Milwaukee.
Otis C. Gross, B.S., '90, Univ. of Minn.
1896. Superintendent of Schools, 338 Oxford Ave., Eau Claire.
Mary Hill.
1891. Assistant Teacher, 3d District, 881 Mound St., Milwaukee.
Harriett B. Merrill, B.S., '90, M.S., '93, Univ. of Wis.
Instructor of Biology in High School, 661 Jackson St., Milwaukee.
Kate S. Nelson.
Grade Teacher, 110 Park Ave., Janesville.
Mae E. Schreiber.
Teacher of Reading, Literature, and Director of Library, Normal School, Milwaukee.
Emma Willard Shrieves.
1895. Physical Training Department, State Normal School, 2834 Cedar St., Milwaukee.
George C. Shutts, Ph.M.
Teacher of Mathematics and History, State Normal School, 306 Main St., Whitewater.
J. L. Thatcher, B.L., '93, Univ. of Wis.
1898. Principal of City Schools, Waupaca.
R. A. Waterbury.
933 Ruse St., N. La Crosse.
1897. R. L. Barton.
1893. Superintendent of Schools, Chippewa Falls.
Mrs. Helen E. Bateman.
Teacher of Literature in National German-American Teachers' Seminary, 558-568 Broadway, Milwaukee.
John P. Bird.
1897. Superintendent of Schools, 904 Cass St., La Crosse.
Julia Campbell.
1880. Assistant Teacher in Public Schools, 7th Grade, 202, 24th St., Milwaukee.
C. P. Cary.
Supervisor of Practice Teaching, State Normal School, 1703 Cedar St., Milwaukee
R. L. Clark.
1897. Principal of School, 508 Washington St., Oshkosh.
W. G. Clough, A.B., '75.
Teacher in High School, Portage.
F. E. Converse, B.L., '88, Univ. of Mich.
1897. Superintendent of Schools, Prospect Ave., Beloit.
G. E. Culver.
1893. Teacher of Physical Science, State Normal School, 1103 Main St., Stevens' Point.
Eber Dafoe.
Principal of High School, Plainfield.
F. E. Doty, B.L.
1897. Superintendent of Schools, Sparta.
J. T. Edwards.
Superintendent of City Schools, Marinette.
Mrs. J. Q. Emery.
Albion.
A. L. Ewing, M.S., '85, Cornell Univ.
Professor of Natural Science, State Normal School, River Falls.
Mrs. Medora Dodge Gammon, Grad. Froebel Asso., Chicago.
1898. Training Department, State Normal School, 1116, 18th St., Milwaukee.
Albert Guttman.
1886. Principal of Schools, Manitowoc.
N. A. Harvey, Ph.D.
1896. Teacher in State Normal School, 2007 Hughitt Ave., West Superior.
Mrs. P. H. Hewitt.
1897. Teacher in 3d Grade, 612 St. Clair St., Manitowoc.
Ellen C. Lloyd Jones.
Proprietor of Home School, Hillside.
Jane Lloyd Jones.
1887. Principal and Proprietor of Home School, Hillside.

WISCONSIN—*Continued*

1897. W. W. Jones.
Superintendent of Schools, Washburn.
William T. Langley, B.S., Mich. Agr. Coll.
Assistant Principal of High School, 2130 John Ave., West Superior.
Mrs. W. T. Langley.
2130 John Ave., West Superior.
J. W. Livingston, Grad. State Normal School.
1897. Institute Conductor in State Normal School, 419 Pine St., Stevens' Point.
Emma J. Luebke.
1895. Principal of 10th District Primary School No. 1, 872, 10th St., N. W. Station, Milwaukee.
Mary L. Lugg.
1893. Teacher in 17th District School, 219 Austin St., Milwaukee.
Harriet Cecil Magee, Grad. Mt. Holyoke Coll., '82.
1884. Director of Drawing, State Normal School, Oshkosh.
C. O. Marsh.
1893. Principal of High School, and (1898) Superintendent of Schools, 103 Clermont St., Antigo.
E. C. Meland, B.L., '89, Univ. of Wis.
Principal of Windsor High School, De Forest.
Charles O. Merica, A.M.
1898. Superintendent Wisconsin Industrial School for Boys, Waukesha.
Thomas B. Mills.
Senator 11th District, West Superior.
John G. Nageler.
1896. Principal of Primary School, 2517 Elm St., Milwaukee.
Oliver Needham, Grad., '96, State Normal School.
Student in Normal School, P. O. Box 30, Midway.
Richard J. O'Hanlon.
1892. Principal of 21st District School, 959, 1st St., Milwaukee.
Frank Ostrander.
Regent of Normal Schools, West Superior.
J. P. Peterson.
1894. Superintendent of Schools, Polk County, West Denmark.
Lorenzo D Roberts.
1889. County Superintendent of Schools, Shawano.
J. F. Sims.
1896. Teacher of Geography and Civics in State Normal School, River Falls.
Edwin R. Smith.
County Superintendent, Manitowoc.
Harriet E. Smith, Grad. Oshkosh Nor. Sch.
1892. Principal of 16th District Primary School, 2409 Cedar St., Milwaukee.
Lizzie P. Swan.
1897. Librarian of State Normal School, Whitewater.
J. W. Swiler.
1880. Superintendent of State School for the Deaf, Delavan.
State Normal School at Oshkosh.
President, ———— Oshkosh.
Miss J. L. Terry.
Teacher in Model Department, State Normal School, River Falls.
J. M. Turner.
Superintendent of Schools, Burlington.
E. W. Walker.
Institute Conductor, State Normal School, 1910 John Ave., West Superior.
Edith M. Watson.
1896. Kindergartner, 1611, 14th St., West Superior.
A. W. Weber.
Principal of High School, Fort Atkinson.
*Ellen G. Weeks.
720 Ontario Ave., Sheboygan.
Allen B. West, Grad., '84, Whitewater State Nor. Sch.
1893. Principal of High School, Lake Mills.
H. A. Whipple.
Principal of High School, Whitewater.
William Hill Williams, A.B., '84, A.M., '87, Williams Coll.
Teacher of Mathematics in State Normal School, Platteville.
1898. Elizabeth Fleming.
1896. Model Teacher Grammar Grade, River Falls.
Thomas Higdon Gentle.
1898. Assistant Professor of Psychology and Pedagogy, State Normal School, Platteville
John Henry Mason, B.S., '82, Worcester Polytechnic Inst., Mass.
Principal Stout Manual Training School, Menomonie.
A. H. Sage, B.S., '86, Cornell Univ.
1893. Teacher of Physics in Normal School, Oshkosh.
Guy Allan Tawney, A.B., '93, A.M., '94, Princeton; Ph.D., '96, Leipzig.
1897. Associate Professor of Mental Science, 674 College Ave., Beloit.

WYOMING

ACTIVE MEMBERS

1894. Estelle Reel.
1894. State Superintendent of Public Instruction, Capitol, Cheyenne.
1895. Henry Merz, B.S., A.M., Blackburn Univ.
1888. Professor of Philosophy and Social Science, University of Wyoming, 407, 9th St., Laramie.

WYOMING—*Continued*

1895. **Emanuel Stuver**, B.S., '77, M.S., '85, Nat. Nor. Univ., Lebanon, O.; M.D., '80, Ohio Med. Coll.; Ph.D., '95, Wyo. Normal and Scientific Coll.
1895. President Wyoming Normal and Scientific College, Rawlins.

1897. **J. O. Churchill.**
Superintendent of Schools, 2504 Ferguson St., Cheyenne.

Library, University of Wyoming.
President, Frank Pierrepont Graves; Librarian, Grace Raymond Hebard, Laramie

ALASKA

ACTIVE MEMBER

1895. **Cassia Patton.**
1894. Teacher of School No. 2, Sitka, Alaska.

CANADA

ACTIVE MEMBERS

1890. **James L. Hughes.**
Inspector of Schools, cor. York and Richmond Sts.; 58 Henry St., Toronto.

1891. **Samuel Bower Sinclair**, A.M., '93, Univ. of Toronto.
1893. Vice-Principal of Normal School, Ottawa.

1895. **Mrs. Ada M. Hughes,**
Superintendent of Kindergartens, Public Schools, 58 Henry St., Toronto.

HUNGARY

ACTIVE MEMBER

1893. **Béla Krécsy**, State High School Teacher's Diploma, '81.
State High School, 6th District at Budapest, VI Lovag Utca 18, Budapest, Hungary.

MEXICO

ACTIVE MEMBER

1897. **Mrs. Olive E. Weston**, Grad., '85, of Froebel Kindergarten Asso.
1896. Principal of Normal Kindergarten Department in Denny School, Puente de Alvarado, 1441, City of Mexico.

CORRESPONDING MEMBERS

[See Minutes of Meeting of Board of Directors, Washington Meeting, p. 38; also Art. III, sec. 2, Constitution, p. 1]

Miss Dorothea Beale, Principal of Ladies' College, Cheltenham, London, England.

Signor Luigi Bodio, Direttore Generale della Statistica del Regno, Roma, Italia.

Professor Ferdinand Buisson, Professor of Education at the Sorbonne, Paris, France.

Gabriel Compayré, Rector of the University at Lyons, France.

Sir Joshua G. Fitch, LL.D., formerly Her Majesty's Inspector of Training Colleges and Lecturer on Education at the University of Cambridge, 13 Leinster Sq., Bayswater, W., London, England.

S. S. Laurie, LL.D., Professor of the History and Institutes of Education in the University of Edinburgh, Scotland.

Dr. E. Levasseur, Professor at the College of France, President of the Statistical Commission for Primary Instruction.

Friedrich Paulsen, Ph.D., Professor of Philosophy and Education in the University of Berlin, Germany.

Michael Sadler, A.M., Director of Special Inquiries and Reports, Department of Education, Whitehall, S. W., London, England.

Hon. E. Lyulph Stanley, Member of the London School Board.

INDEX TO LIST OF
LIFE DIRECTORS, LIFE AND ACTIVE MEMBERS

[Capital letters following years indicate: D, Life Director; L, Life Member; A, Active Member.]

[Deceased members are indicated by a *.]

Abbott, D. Q., Ga., 1896, A.
Ackerman, J. H., Ore., 1895, A.
Adams, Cecilia, Iowa, 1898, A.
Adams, J. S., N. Y., 1896, A.
Adee, J. N., Ill., 1895, A.
Agricultural Coll., Kan., 1897, A.
Ahern, M. E., Ill., 1896, A.
Aiton, George B., Minn., 1894, A.
Ala. Polytechnic Insti., Ala., 1897, A.
*Albee, George Sumner, Wis., 1884, L.
Albert, C. J., Ill., 1896, A.
Albrecht, F. J., Ill., 1891, A.
Albro, S. H., Pa., 1895, A.
Alden, Mrs. Amelia D., N. Y., 1896, A.
Alderman, E. A., N. C., 1894, A.
Aldridge, Vincent, N. Y., 1891, A.
Alexander, Charles T., Tex., 1897, A.
Allen, Mrs. Ella N., Wis., 1892, A.
Allen, Ira W., Ill., 1870, L.
Allen, L. H., N. D., 1897, A.
Allen, Walter, Wis., 1896, A.
Allensworth, Allen, Utah, 1892, A.
Alley, F. S., Ky., 1896, A.
Allgood, Robert V., Ala., 1898, A.
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Almond, W. S., Ind., 1891, A.
Alumni Asso., Milwaukee, Wis., 1884, L.
Ambrose, H. T., N. Y., 1895, A.
Ames, Charles H., Mass., 1896, A.
Amherst Coll. Library, Mass., 1897, A.
Amidon, L. E., Mich., 1896, A.
Anderson, Bessie C., Va., 1898, A.
Anderson, John J., N. Y., 1871, L.
Anderson, P. J., Ohio, 1896, A.
Anderson, Mrs. P. J., Ohio, 1896, A.
Anderson, W. H., W. Va., 1890, A.
Arbury, Frederick W., Mich., 1895, A.
Arey, Oliver C., N. Y., 1870, L.
Armitage, B. F., Ill., 1896, A.
Armstrong, George P., Mass., 1896, A.
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Arnold, E. Herman, Conn., 1896, A.
Arnold, Sarah L., Mass., 1895, A.
Arnot, S. P., Neb., 1897, A.
Arrowsmith, S. V., N. J., 1898, A.
Ashbaugh, Z. R., Mo., 1897, A.
Ashmore, Otis, Ga., 1894, A.
Atkinson, Fred W., Mass., 1894, A.
Atlanta Univ., Ga., 1895, A.
Augsburg, D. R., Cal., 1895, A.
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Avery, Lewis B., Cal., 1895, A.
Avery, Myrtilla, N. Y., 1897, A.
Avery, Rachel F., Pa., 1879, L.
Aylward, John A., Wis., 1884, L.
Ayres, Edward, Ind., 1892, A.
Ayres, Henrietta B., Colo., 1893, A.
Babcock, C. A., Pa., 1893, A.
Babcock, J. W., N. Y., 1894, A.
Bader, John H., Va., 1894, A.
Baer, Clara G., La., 1897, A.
Bailey, Emma V., Ill., 1897, A.
Bailey, M. A., Kan., 1895, A.
Bailey, Walter J., Cal., 1895, A.
Baird, Mrs. J. H., N. Y., 1897, A.
Baker, Benjamin, R. I., 1892, A.
Baker, James H., Colo., 1884, A.
Baker, O. M., Mass., 1892, A.
Baker, Thomas O., N. Y., 1892, A.
Baker, W. H., Ga., 1890, L.
Balcom, Arthur G., N. J., 1898, A.
Baldwin, Joseph, Tex., 1883, A.
Ballard, C. A., Minn., 1896, A.
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Ballou, C. G., Ohio, 1895, A.
Bancroft, Jessie, N. Y., 1897, A.
Bancroft, Margaret, N. J., 1897, A.
Banker, Lizzie L., Neb., 1890, A.
Barbour, O. F., Ill., 1889, A.
Bardeen, C. W., N. Y., 1890, A.
Bardwell, C. M., Ill., 1892, A.
Bargen, I. I., Minn., 1897, A.
Barnard, Frank J., Wash., 1891, A.
Barnard, Henry, Conn., 1884, L.
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Barnard, Job, D. C., 1898, A.
Barnes, Earl, Cal., 1891, A.
Barnes, Mrs. F. S., N. Y., 1896, A.
Barnes, J. Walter, W. Va., 1891, A.
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Barnum, Anna, N. D., 1897, A.
Barrett, A. T., Tenn., 1894, A.
Barrett, Charles S., Ohio, 1895, A.
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Barrett, R. C., Iowa, 1896, A.
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Barringer, William N., N. J., 1894, A
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Bartholf, William J., Ill., 1897, A.
Bartholomew, Susie M., Ky., 1894, A.
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Bartlett, William A., Minn., 1897, A.
Barton, R. L., Wis., 1897, A.
Bascom, John, Mass., 1884, L.
Bashford, James W., Ohio, 1894, A.
Bass, E. E., Miss., 1895. A.
Bass, George F., Ind., 1896, A.
Bateman, Mrs. H. E., Wis., 1897, A.
Bates, William C., Mass., 1896, A.
Baumann, C. C., Iowa, 1897, A.
*Baumgartner, Elizabeth, Ill., 1896,
Baxter, Charles J., N. J., 1896, A.
Bayliss, Alfred, Ill., 1896, A.
Baylor, Adelaide S., Ind., 1897, A.
Beach, William H., Wis., 1896, A.
Beadle, William H. H., S. D., 1890, A.
Beal, William, Iowa, 1896, A.
Beals, S. DeWitt, Neb., 1876, L.
Beardshear, W. M., Iowa, 1889, A.
Beardsley, A. E., Colo., 1895, A.
Beardsley, Elias J., N. Y., 1892, A.
Beattys, Frank D., N. Y., 1894, A.
Becht, J. George, Pa., 1896, A.
Beck, George, Wis., 1884, L.
Beggs, Robert H., Colo., 1884, A.
Beggs, S. S., Ill., 1896, A.
Beistle, Ella, Ohio, 1897, A.
Belknap, Emmet, N. Y., 1892, A.
Bell, Alexander Graham, D. C., 1884, L.
Bell, William A., Ind., 1876, L.
Belman, W. C., Ind., 1895, A.
Beloit City School Board, Wis., 1884, L.
Bender, Ida C., N. Y., 1895, A.

Benedict, E. M., Ga., 1897, A.
Benedict, W. H., N. Y., 1892, A.
Benham, N. L., N. Y., 1895, A.
Bennett, Charles A., Ill., 1896, A.
Bennett, C. W., Ohio, 1884, L.
*Bennett, Hampton, Ohio, 1880, L.
Bennett, Mrs. Lydia, N. J., 1896, A.
Benson, Christine, Cal., 1897, A.
Benton, George W., Ind., 1894, A.
Bergey, D. H., Pa., 1898, A.
Berlin, A. H., Del., 1896, A.
Berry, B. D., Ill., 1895, A.
Bessey, Charles E., Neb., 1895, A.
Bevans, Homer, Ill., 1897, A.
Bicknell, Thomas W., R. I., 1882, D.
Billingsly, J. J., Iowa, 1895, A.
Bingham, Reuben S., Wash., 1896, A.
Bingham, Robert, N. C., 1884, L.
Birchard, C. C., N. Y., 1895, A.
Bird, John P., Wis., 1897, A.
Bishop, Eliza A., Pa., 1892, A.
Bishop, J. Remsen, Ohio, 1894, A.
Bishop, Nathan L., Conn., 1895, A.
Bissell, Annie M., N. Y., 1895, A.
Black, James C., Ida., 1888, A.
Black, S. T., Cal., 1895, A.
Black, William H., Mo., 1895, A.
Black, William J., Ill., 1897, A.
Blair, John J., N. C., 1895, A.
Blaisdell, H. R., Ky., 1893, A.
Blake, Mrs. E. M., Ark., 1898, A.
Blaker, Mrs. E. A., Ind., 1896, A.
Blakesley, O. J., Colo., 1896, A.
Blakiston, Mary, Ohio, 1895, A.
Blasingame, J. C., Tenn., 1897, A.
Blewett, Benjamin, Mo., 1897, A.
Bliss, Frederick L., Mich., 1895, A.
Bliss, J. J., Ohio, 1896, A.
Blodgett, A. B., N. Y., 1890, A.
Blodgett, S. F., Mass., 1897, A.
Board of Ed., Abilene, Kan., 1886, L.
Board of Ed., Dodge City, Kan., 1886, L.
Board of Ed., Janesville, Wis., 1884, L.
Board of Ed., La Crosse, Wis., 1884, L.
Board of Ed., Milwaukee, Wis., 1884, L.
Board of Ed., Nashville, Tenn., 1889, D.
Board of Ed., Northfield, Minn., 1890, L.
Board of Ed., Oshkosh, Wis., 1884, L.
Board of Ed., Ottawa, Kan., 1886, L.
Board of Ed., Sedgwick, Kan., 1886, L.
Board of Ed., Watertown, Wis., 1884, L.
Board of Regents, State Nor. Sch., Wis., 1884, L.
Bodenhamer, D. S., Tex., 1895, A.
Bodler, Anna, Pa., 1898, A.
Bodwell, Edwin J., Neb., 1895, A.
Boice, H. B., N. J., 1896, A.
Bolenbaugh, G. B., Ohio, 1896, A.
Bomberger, F. J., Minn., 1895, A.
Bond, G. G., Ga., 1894, A.
Bond, J. D., Minn., 1896, A.
Bonebrake, Lewis D., Ohio, 1890, A.
Boone, Richard G., Mich., 1884, A.
Boston College, Mass., 1897, A.
Bostwick, O. P., Iowa, 1891, A.
Boughton, Willis, Ohio, 1895, A.
Bouldin, Susie S., Md., 1898, A.
Boutelle, C. M., Minn., 1896, A.
Bouton, Eugene, Mass., 1895, A.
Bowers, H. W., Ind., 1896, A.
Bowman, G. L., Wis., 1895, A.
Bowman, Perla G., Ohio, 1898, A.
Boyd, David R., Okla., 1892, A.
Boyd, Mrs. Gaston, Kan., 1897, A.
Boyd, Jennie, Ark., 1898, A.
Boyd, W. W., Ohio, 1894, A.
Boyden, Albert G., Mass., 1890, A.
Boyden, Arthur C., Mass., 1897, A.
Boyden, Wallace C., Mass., 1896, A.
Boyer, E. R., Ill., 1897, A.
Boyle, Charles A., Kan., 1897, A.
Boyle, Edward, Ind., 1895, A.
Braden, John, Tenn., 1895, A.
Bradley, Charles A., Colo., 1893, A.
Bradley, John E., Ill., 1890, A.
Bradley, Milton, Mass., 1892, A.
Bradt, E. T., Mich., 1897, A.
Brandegee, J. E., N. Y., 1896, A.
Brandt, F. B., Pa., 1897, A.
Brier, Warren J., Wis., 1895, A.
Bright, O. T., Ill., 1893, A.
Bristol, E. N., N. Y., 1896, A.
Britton, C. J., Ohio, 1894, A.
Brock, H. Z., Mich., 1897, A.
Brockett, Zue H., D. C., 1898, A.
Broderick, Kate G., N. Y., 1896, A.
Brooks, Edward, Pa., 1876, L.
Brooks, Sarah C., Minn., 1894, A.
Brown, C. E., Wis., 1895, A.
Brown, Elias, D. C., 1898, A.
Brown, Elizabeth V., D. C., 1898, A.
Brown, Ellis W., D. C., 1898, A.
Brown, Elmer E., Cal., 1891, A.
Brown, Eugene, Iowa, 1897, A.
Brown, George P., Ill., 1880, L.
Brown, George W., Ill., 1893, A.
Brown, George W., Mass., 1896, A.
Brown, H. B., Ind., 1895, A.
Brown, Helen M., Colo., 1895, A.
Brown, Jesse H., Ind., 1891, A.
Brown, John F., Ind., 1896, A.
Brown, Kate L., Neb., 1897, A.
Brown, Le Roy D., Cal., 1888, D.
Brown, Miss Marion, La., 1889, A.
Brown, William O., Wis., 1896, A.
Bruce, William G., Wis., 1893, A.
Brumbaugh, M. G., Pa., 1893, A.
Bruot, Marie L., Ohio, 1896, A.
Bryan, William L., Ind., 1893, A.
Buchanan, George V., Mo., 1894, A.
Buchanan, John T., N. Y., 1890, A.
Bucholz, L. W., Fla., 1898, A.
Buechele, J. L., Iowa, 1897, A.
Buehrle, R. K., Pa., 1892, A.
Bulkley, Julia E., Ill., 1895, A.
Bunzel, Belle, Ark., 1898, A.
Burch, Arthur, Wis., 1896, A.
Burdick, A. Hall, N. Y., 1892, A.
Burk, Frederic L., Cal., 1892, A.
Burke, Mrs. B. Ellen, N. Y., 1894, A.
Burke, J. E., Mass., 1895, A.
Burkett, G. F., Neb., 1897, A.
Burns, James C., Ill., 1895, A.
Burns, J. J., Ohio, 1880, L.
Burns, Ralph H., N. D., 1896, A.
Burris, William P., Ohio, 1895, A.
Burroughs, George S., Ind., 1895, A.
Burton, R. W., Ill., 1896, A.
Busby, Isaac V., Ind., 1896, A.
Bushnell, H. T., Iowa, 1897, A.
Butler, Nicholas M., N. Y., 1885, D.
Button, William J., Ill., 1896, A.
Butts, Annice B., Ill., 1896, A.
Buzzell, Delos, Ill., 1897, A.
Byington, S. Lillian, Ill., 1895, A.
Cahalan, Mary A., Ala., 1895, A.
Caldwell, B. C., La., 1896, A.
Caldwell, Miss C. J., Ohio, 1897, A.
Caldwell, H. W., Neb., 1896, A.
Calkins, F. L., Ill., 1895, A.
Call, A. D., N. Y., 1898, A.
Cammack, Ira I., Mo., 1895, A.
Camp, David N., Conn., 1892, A.
Campbell, A. G., Kan., 1886, L.
Campbell, Julia, Wis., 1897, A.
Campbell, W. H., Ill., 1895, A.
Canfield, James H., Ohio, 1884, D.
Cannon, George L., Colo., 1895, A.
Capen, Elmer H., Mass., 1896, A.
Capen, Frank S., N. Y., 1896, A.
Carden, A. D., Ark., 1898, A.
Carey, C. E., Ohio, 1895, A.
Carfrey, J. H., Mass., 1897, A.
Cargo, R. M., Pa., 1896, A.
Carlisle, James M., Tex., 1895, A.
Carlton, E. A., Mont., 1897, A.
Carnagey, J. A., Ind., 1895, A.
Carpenter, J. H., Wis., 1884, L.
Carpenter, Nellie M., Ill., 1896, A.
Carr, J. W., Ind., 1897, A.
Carroll, C. F., Mass., 1895, A.
Carroll, Mary H., N. Y., 1898, A.
Carter, A. H., Ark., 1898, A.
Cary, C. P., Wis., 1897, A.
Case, Harriet F., Ind., 1898, A.
Case, Richard, N. J., 1894, A.
Casey, W. V., Colo., 1895, A.

Cates, E. E., Md., 1898, A.
Chadsey, Charles E., Colo., 1895, A.
Chalmers, W. W., Ohio, 1895, A.
Chamberlain, A. H., Cal., 1897, A.
Champlin, Howard, Ohio, 1896, A.
Chandler, John W., N. Y., 1890, A.
Chandler, Willard H., Wis., 1884, L.
Chapman, Frederick E., Mass., 1894, A.
Charles, Thomas, Ill., 1888, A.
Chase, Susan F., N. Y., 1898, A.
Cheever, W. H., Wis., 1896, A.
Cheney, Augustus J., Ill., 1884, L.
Cheney, Francis J., N. Y., 1891, A.
Childs, Anna G., N. Y., 1897, A.
Christy, A. B., Minn., 1897, A.
Christy, Anna H., Minn., 1897, A.
Church, George E., R. I., 1892, A.
Churchill, J. O., Wyo., 1897, A.
Clair, Francis R., N. Y., 1894, A.
Clancy, Albert W., Ill., 1892, A.
Clancy, N. J., Tex., 1897, A.
Clark, A. O., Utah, 1897, A.
Clark, Frank H., Colo., 1886, L.
Clark, John S., Mass., 1892, A.
Clark, L. H., Wis., 1884, L.
Clark, R. L., Wis., 1897, A.
Clark, W. A., Neb., 1895, A.
Clarke, Elva E., Kan., 1894, A.
Clarke, Etta I., Kan., 1894, A.
Clarke, Francis D., Mich., 1897, A.
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Claxton, P. P., N. C., 1898, A.
Clendenen, T. C., Ill., 1897, A.
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Clute, Oscar, Fla., 1895, A.
Cobb, Charles Newell, N. Y., 1894, A.
Coddington, A. O., Ill., 1893, A.
Coe, Emily M., N. C., 1880, L.
Cogswell, Francis, Mass., 1893, A.
Colby, E. C., N. Y., 1896, A.
Cole, Charles W., N. Y., 1892, A.
Cole, L. W., Okla., 1898, A.
Cole, William H., W. Va., 1870, L.
Colegrove, A. D., Pa., 1895, A.
Coleman, J. D. Ky., 1892, A.
Colgrove, C. P., Iowa, 1897, A.
Collins, J. H., Ill., 1895, A.
Collins, John S., Mo., 1897, A.
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Comings, Fannie S., N. Y., 1895, A.
Comstock, Theodore B., Cal., 1895, A.
Congdon, C. H., Ill., 1894, A.
Conkling, W. E., Mich., 1896, A.
Conley, George H., Mass., 1897, A.
Converse, F. E., Wis., 1897, A.
Conway, Clara, Ill., 1887, L.
Cook, Charles F., Me., 1898, A.
Cook, E. H., N. Y., 1872, D.
Cook, Elizabeth B., Ill., 1896, A.
Cook, George B., Ark., 1895, A.
Cook, Jennie, Ark., 1898, A.
Cook, John W., Ill., 1890, A.
Cooley, Mrs. Alice W., Minn., 1896, A.
Cooley, E. G., Ill., 1897, A.
Cooley, Frank W., Mich., 1895, A.
Cooley, Le Roy C., N. Y., 1896, A.
*Coon, H. C., N. Y., 1897, A.
Cooper, Frank B., Iowa, 1894, A.
Cooper, Frank Irving, Mass., 1893, A.
Cooper, John, Ind., 1897, A.
Cooper, Oscar H., Tex., 1894, A.
Coover, Nathaniel, Kan., 1886, L.
Corbett, Henry R., Ill., 1890, A.
Corbin, J. C., Ark., 1898, A.
Corcoran, Tressa M., Ohio, 1896, A.
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Cox, E. Morris, Cal., 1896, A.
Cox, E. S., Ohio, 1896, A.
Cox, Henry C., Ill., 1895, A.
Cox, Jean, N. J., 1897, A.
Cox, Martin Luther, N. J., 1893, A.
Coy, Emma, Ill., 1897, A.
Coy, E. W., Ohio, 1883, L.
Crabbe, J. G., Ky., 1897, A.
Crabtree, J. W., Neb., 1895, A.
Craig, Oscar J., Mont., 1892, A.
Crane, Mrs. Charles R., Ill., 1897, A.
Crane, Frank, S. D., 1895, A.
Crane, Julia E., N. Y., 1895, A.
Cranston, R. W., Minn., 1896, A.
Crissy, I. O., N. Y., 1898, A.
Crist, Henry M., N. Y., 1896, A.
Crockett, May M., Ill., 1895, A.
Cropsey, Miss N., Ind., 1891, A.
Crosier, M. E., Iowa, 1895, A.
Cross, C. R., Wis., 1895, A.
Crossley, J. J., Iowa, 1895, A.
Crouch, Sarah E., Mo., 1895, A.
Crouse, Mrs. J. N., Ill., 1893, A.
Cruikshank, James, N. Y., 1864, L.
Culbertson, E. D. Y., Iowa, 1895, A.
Culver, G. E., Wis., 1897, A.
Cummins, Mrs. M. S., Mont., 1897, A.
Cunningham, J. B., Ala., 1895, A.
Cupples, J. W., Ill., 1896, A.
Curran, Ulysses T., Ohio, 1866, I.
Currier, E. H., N. Y., 1897, A.
Curry, Robert, Neb., 1884, L.
Curtis, A. E. Mich., 1896, A.
Curtis, C. C., Minn., 1896, A.
Curtis, Virgil G., Minn., 1892, A.
Curtiss, Frederick A., Conn., 1894, A.
Dafoe, Eber, Wis., 1897, A.
Dalton, T. E., Ariz., 1898, A.
Dana, Fenella, Kan., 1895, A.
Daniels, J. W., Ida., 1898, A.
Davidson, Charles E., Ohio, 1880, L.
Davidson, William M., Kan., 1890, A.
Davis, A. J., Pa., 1898, A.
Davis, Allan, D. C., 1895, A.
Davis, Booth C., N. Y., 1896, A.
Davis, Buel T., Wis., 1894, A.
Davis, Charles M., N. J., 1893, A.
Davis, Emma C., Ohio, 1894, A.
Davis, Eva L., Ark., 1898, A.
Davis, George S., N. Y., 1896, A.
Davis, George W., Ill., 1896, A.
Davis, John W., N. Y., 1895, A.
Davis, J. M., Iowa, 1898, A.
Dawes, H. E., Neb., 1896, A.
Dawson, H. T., N. Y., 1895, A.
Day, L. W., Ohio, 1888, D.
Deahl, J. N., W. Va., 1896, A.
Deane, Charles W., Conn., 1889, A.
Deatrick, W. W., Pa., 1892, A.
De Garmo, Charles, N. Y., 1889, A.
Delano, Edward C., Ill., 1895, A.
Denfeld, Robert E., Minn., 1890, A.
Denison, Hattie, Ark., 1898, A.
Deupree, J. G., Miss., 1897, A.
Dewey, James A., Pa., 1893, A.
Dewey, John, Ill., 1897, A.
Dewey, Melvil, N. Y., 1892, A.
D ial, S. T, Ohio, 1895, A.
Dick, Fred., Colo., 1895, A.
Dickey, C. L., Ohio, 1895, A.
Dietrich, Charles H., Ky., 1891, A.
Dietrich, John, Colo., 1895, A.
Dillman, L. M., Ill., 1886, A.
Dixon, B. V. B., La., 1897, A.
Doane, Letitia L., Ill., 1897, A.
Dobson, W. D., Mo., 1897, A.
Dodd, Arthur A., Mo., 1885, A.
Dodge, M. Luella, Ill., 1897, A.
Dodge, William C., Ill., 1896, A.
Dodson, Mary F., Ky., 1892, A.
Dolphin, N. E., Kan., 1895, A.
Donohoe, Mary J., N. J., 1894, A
Doron, W. A., Iowa, 1897, A.
Doty, F. E., Wis., 1897, A.
Dougherty, Mabel E., Ill., 1 89
Dougherty, N. C., Ill., 1887, D.
Douglas, R. S., Mo., 1897, A.
Dow, J. J., Minn., 1896, A.
Downes, J. M. N., Ky., 1894, A.
Downing, A. S., N. Y., 1891, A.
Doyle, Marie, Wis., 1891, A.
Dozier, Melville, Cal., 1895, A.
Draper, Andrew S., Ill., 1888, A.

Draughan, Abbie W., Ark., 1895, A.
Dreher, E. S., S. C., 1896, A.
Ducker, W. H., Ill., 1895, A.
Dudgeon, R. B., Wis., 1894, A.
Dudley, Mrs. E., Iowa, 1897, A.
Dunton, Larkin, Mass., 1895, A.
Durham, Mrs. C. M., Pa., 1892, A.
Dutton, Bettie A., Ohio, 1880, L.
Dutton, S. T., Mass., 1895, A.
Dyer, F. B., Ohio, 1896, A.
Dyer, Frank R., Kan., 1891, A.
Eakins, Mrs. Millie R., Ill., 1896, A.
Eastman, William R., N. Y., 1896, A.
Easton, Warren, La., 1895, A.
Eaton, Ira T., Ill., 1894, A.
Eaton, James F., Iowa, 1897, A.
Eaton, John, D. C., 1893, A.
Ebaugh, Z. C., Md., 1897, A.
Eden, Philip, Wis., 1884, L.
Edgerly, Joseph G., Mass., 1896, A.
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Edmund, Gertrude, Mass., 1897, A.
Edson, A. W., N. Y., 1896, A.
Edwards, H. R., Minn., 1897, A.
Edwards, J. T., Wis., 1897, A.
Ehinger, C. E., Pa., 1897, A.
Ela, Clarissa E., Ill., 1897, A.
Elder, Ella C., N. Y., 1896, A.
Elder, E. W., Colo., 1895, A.
Elgas, Mathew J., N. Y., 1891, A.
Eliot, Charles W., Mass., 1892, A.
Elliott, J. F., Ala., 1898, A.
Ellis, John C., Ill., 1887, A.
Ellis, William Austin, Mich., 1887, A.
Ellsworth, Henry W., N. Y., 1896, A.
Elmer, Frances A., Minn., 1897, A.
Elson, W. H., Wis., 1895, A.
Elwell, Mrs. O. F., N. J., 1896, A.
Ely, Sarah Y., N. J., 1892, A.
Emerson, Henry P., N. Y., 1893, A.
Emery, John Q., Wis., 1884, L.
Emery, Mrs. J. Q., Wis., 1897, A.
English, Rebecca F., Cal., 1888, L.
Engstrom, A. E., Minn., 1895, A.
Estee, James A., N. Y., 1896, A.
Evans, Charles H., Mo., 1886, L.
Evans, Charles W., W. Va., 1896, A.
Evans, Lawton B., Ga., 1894, A.
Evans, William P., Mo., 1898, A.
Ewing, A. L., Wis., 1897, A.
Ewing, R. B., Ohio, 1898, A.
Fairchild, E. T., Kan., 1886, L.
Fairchild, George T., Ky., 1886, D.
Fall, Delos, Mich, 1897, A.
Fant, John C., Miss., 1897, A.
Farley, D. H., N. J., 1896, A.
Farley, George L., Neb., 1897, A.
Farnsworth, S. A., Minn., 1894, A.
Farr, F. D., Ill., 1897, A.
Farrand, Wilson, N. J., 1895, A.
Farrell, Edward D., N. Y., 1890, A.
Farrell, Mrs. E. D., N. Y., 1896, A.
Farson, M. Elizabeth, Ill., 1897, A.
Fay, Etta J., Minn., 1896, A.
Felker, Allie M., Cal., 1895, A.
Fell, Anna M., N. J., 1897, A.
Fendley, J. M., Tex., 1895, A.
Fenton, George, N. Y., 1896, A.
Ferguson, E. E., Mich., 1896, A.
Fernald, M. C., Me., 1890, A.
Finley, John H., Ill., 1896, A.
Fisher, Gilman C., R. I., 1892, A.
Fisher, H. W., Pa., 1892, A.
Fisk, Herbert F., Ill., 1891, A.
Fitch, Ferris S., Mich., 1890, A.
Fitz, George W., Mass., 1898, A.
Fitzgibbon, T. F., Ind., 1895, A.
Fitzpatrick, Frank A., Mass., 1884, A.
Flavin, John T., Wis., 1884, L.
Fleming, Elizabeth, Wis., 1898, A.
Fleming, Mary A., N. Y., 1890, A.
Fleshman, Arthur C., Ky., 1894, A.
Flick, W. B., Ind., 1895, A.
Flickinger, J. R., Pa., 1898, A.
Fling, Allen C., Neb., 1898, A.
Foerste, A. F., Ohio, 1896, A.
Foos, Anna, Neb., 1897, A.
Foose, L. O., Pa., 1896, A.
Fooshe, J. Frank, S. C., 1898, A.
Foote, Mary C., Ill., 1897, A.
Forbes, Alexander, Ill., 1876, L.
Forbes, Ira L., Mich., 1895, A.
Forbes, John A., Ill., 1898, A.
Ford, Lyman H., Minn., 1897, A.
Foresman, H. A., Ill., 1896, A.
Foresman, Robert, Ill., 1896, A.
Forrest, J. T., Wash., 1895, A.
Fort, W. H., Mich., 1897, A.
Foshay, James A., Cal., 1893, A.
Foster, C. E., Tex., 1897, A.
Fowler, W. K., Neb., 1892, A.
Fox, William F., Va., 1894, A.
Franklin, George A., Minn., 1897, A.
Frazee, Victor, R. I., 1896, A.
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Freeman, John T., Md., 1898, A.
Freer, H. H., Iowa, 1884, A.
Freer, Paul C., Mich., 1897, A.
French, George W., N. Y., 1895, A.
French, Harlan P., N. Y., 1891, A.
French, O. E., Iowa, 1895, A.
Friedberg, William B., N. Y., 1892, A.
Friedel, Charles, Ore., 1897, A.
Friedman, Anna E., N. Y., 1895, A.
Frost, H. H., Mich., 1895, A.
Frost, J. M., Ill., 1897, A.
Fruchte, Amelia C., Mo., 1896, A.
Fulton, Robert B., Miss., 1894, A.
Fulton, W. L., Ohio, 1896, A.
Futrall, Lula M., Ark., 1898, A.
Futrall, Thomas A., Ark., 1887, A.
Gage, Nathaniel P., D. C., 1898, A.
Galbreath, L. H., N. Y., 1887, A.
Gamble, George W., Conn., 1896, A.
Gammon, Mrs. M. D., Wis., 1897, A.
Gans, W. G., Pa., 1895, A.
Gantvoort, A. J., Ohio, 1894, A.
Garrett, William R., Tenn., 1886, D.
Garrette, Irene, Iowa, 1897, A.
Garrison, S. Olin, N. J., 1898, A.
Garvin, John B., Colo., 1895, A.
Gastman, E. A., Ill., 1895, A.
Gates, Elmer, Md., 1898, A.
Gates, Howard, Ark., 1896, A.
Gayer, Cora M., Ohio, 1897, A.
Gayhart, Walter C., Nev., 1895, A.
Geary, Grace, Mo., 1897, A.
Geer, David S., Ill., 1886, A.
Geeting, D. M., Ind., 1895, A.
Gentle, T. H., Wis., 1898, A.
George, Austin, Mich., 1895, A.
Germann, George B., N. Y., 1898, A.
Gettemy, Mrs. Mary E., Ill., 1892, A.
Gibson, C. B., Ga., 1898, A.
Gibson, John A., Pa., 1896, A.
Giffin, W. M., Ill., 1895, A.
Gifford, Jennie, Ohio, 1896, A.
Gilbert, C. B., N. J., 1893, A.
Gilbert, Newell D., Ill., 1895, A.
Gilday, Mary, Mo., 1895, A.
Gillan, Silas Y., Wis., 1895, A.
Gillespie, Mary, Ill., 1897, A.
Gillespie, Nellie, Ill., 1897, A.
Gillett, Emma M., D. C., 1898, A.
Gillman, Daniel C., Md., 1896, A.
Gladding, A. E., Ohio, 1896, A.
Glass, E. C., Va., 1894, A.
Glenn, G. R., Ga., 1895, A.
Glover, Nathan L., Ohio, 1889, A.
Gminder, A. J., Md., 1898, A.
Golden, H. W., Pa., 1898, A.
Goodhue, Lincoln P., Ill., 1893, A.
Goodnough, Walter S., N. Y., 1882, A.
Gordon, Joseph C., Ill., 1897, A.
Gordy, J. P., Ohio, 1896, A.
Gordy, W. F., Conn., 1898, A.
Gorton, Charles E., N. Y., 1896, A.
Goss, David K., Ind., 1895, A.
Gotwalls, Joseph K., Pa., 1892, A.
Gove, Aaron, Colo., 1888, D.

Graeser, C. A., S. C., 1897, A.
Graham, Hugh A., Mich., 1895, D.
Grandy, Mary A., Mass., 1893, A.
Grant, Miss A. L., D. C., 1898, A.
Grant, H. L., Ill., 1896, A.
Gratz, Simon, Pa., 1879, L.
Gray, Thomas J., Minn., 1895, A.
Green, James M., N. J., 1892, A.
Greene, John A., N. Y., 1893, A.
Greenlee, Ida K., Mass., 1893, A.
Greenlee, L. C., Colo., 1892, A.
Greenman, A. V., Ill., 1897, A.
Greenwood, J. M., Mo., 1886, D.
Gregory, Benjamin C., N. J., 1894, A.
* Gregory, John T., Ala., 1895, A.
Griffith, E. W., N. Y., 1896, A.
Griffith, George, N. Y., 1893, A.
Griffiths, G. C., Ill., 1896, A.
Grimsley, G. A., N. C., 1898, A.
Gross, Otis C., Wis., 1896, A.
Grossman, John H., Ill., 1895, A.
Groszmann, M. P. E., Va., 1894, A.
Groves, Charles W., Ill., 1896, A.
Guden, Anna J., N. J., 1894, A.
Guilliams, J. M., Tenn., 1897, A.
Gunnison, Walter B., N. Y., 1896, A.
Gurnea, Jennie E., Ill., 1897, A.
Guss, Roland W., Mass., 1895, A.
Guttmann, Albert, Wis., 1897, A.
Gwynn, Henry B., Md., 1898, A.
Hadley, Hiram, N. Mex., 1891, A.
Hafford, F. S., Ariz., 1897, A.
Hagerty, C. T., N. Mex., 1895, A.
Haggett, George B., Ky., 1897, A.
Haight, R. A., Ill., 1895, A.
Hailmann, W. N., Ohio, 1879, A.
Hale, George D., N. Y., 1891, A.
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Hazen, David H., D. C., 1898, A.
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Heins, Mary, Pa., 1895, A.
Helmer, Harry, Ill., 1895, A.
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Herrig, Anna B., S. D., 1895, A.
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King, Anna H., Ohio, 1895, A.
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King, William F., Iowa, 1884, A.
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Kirk, John R., Mo., 1891, A.
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Kneil, Thomas R., N. Y., 1895, A.
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Knight, J. A., Ala., 1898, A.
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Lamb, Rachel E., Md., 1894, A.
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Lavers, E. C., Pa., 1892, A.
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Lazenby, William R., Ohio, 1895, A.
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Lemon, Nora H., Neb., 1897, A.
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Leviston, Irwen, Neb., 1895, A.
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Logan, Anna E., Ohio, 1896, A.
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Longan, G. B., Mo., 1897, A.
Longstreth, Emma J., Pa., 1894, A.
Look, Frances H., Mass., 1896, A.
Loos, Charles L., Ohio, 1895, A.
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Lott, H. C., Mich., 1897, A.
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Low, Seth, N. Y., 1895. A.
Lowe, J. S., Ohio, 1895, A.
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*Lyman, F. A., N. Y., 1897, A.
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Lyon, Howard, N. Y., 1896, A.
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Lyon, P. W., N. J., 1898, A.
Lyon, W. F., Mich., 1897, A.
Lyser, Albert, Cal., 1898, A.
Lyte, E. Oram, Pa., 1891, L.
MacAlister, James, Pa., 1895, A.
Macdona, Kate P., N. Y., 1895, A.
MacDonald, A. H., Cal., 1898, A.
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Mack, William S., Ill., 1895, A.
Mackenzie, David, Mich., 1896, A.
Mackey, E., Pa., 1891, A.
Mackey, William A., N. Y., 1894, A.
MacLean, George E., Neb., 1897, A.
Magee, Harriet C., Wis., 1897, A.
Magovern, Mary A., N. Y.. 1896, A.
Maguire, Mrs. S. C., Mo., 1897, A.
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*Manley, R. M., Cal., 1870, L.
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Marsh, C. O., Wis., 1897, A.
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Marvin, Arthur, N. Y., 1898, A.
Mason, J. H., Wis., 1898, A.
Mason, William A., Pa., 1898, A.
Massee, J. Edman, N. Y., 1896, A.
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Maurer, G. C., Ohio, 1895, A.
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Maxwell, William H., N. Y., 1892, A.
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Mayne, D. D., Wis., 1894, A.
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McClung, J. S., Colo., 1895, A.
McClure, S. R., Pa., 1896, A.
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McConathey, W. J., Ky., 1896, A.
McConnell, J. J., Iowa, 1895, A.
McCord, W. A., Iowa, 1895, A.
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McDaniel, C. M., Ind., 1896, A.
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McFarland, George A., N. D., 1895, A.
McGhee, John S., Mo., 1897, A.
McGinniss, James, Ky., 1893, A.
McGlynn, J. J., Ill., 1895, A.
McIntire, W. W., Ohio, 1895, A.
McIver, Charles D., N. C., 1896, A.
McKay, F. M., Ill., 1897, A.
McKee, J. Milford, N. Y., 1895, A.
McKenny, Charles, Mich., 1897, A.
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McNelis, N. P., Pa., 1897, A.
McNevin, C. F., Iowa, 1896, A.
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Meacham, Adda V., Ill., 1896, A.
Mehan, J. M., Iowa, 1892, A.
Meland, E. C., Wis., 1897, A.
Meleney, Clarence E., N. Y., 1896, A.
Melhinch, Miss L. A., N. Y., 1897, A.
Merica, C. O., Wis., 1897, A.
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Merrick, H. V., Ohio, 1898, A.
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Mertz, Henry N., Ohio, 1895, A.
Merwin, J. B., Mo., 1871, L.
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Mezger, Robert, N. J., 1895, A.
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Michener, J. H., Pa., 1898, A.
Mickle, Robert A., Ala., 1895, A.
Miller, Miss A. N., Colo., 1895, A.
Miller, C. C., Ohio, 1892, A.
Miller, George I., Iowa, 1896, A.
Miller, G. R., N. Y., 1896, A.
Miller, J. H., Neb., 1886, L.
Miller, Kelly, D. C., 1898, A.
Miller, Lewis, Ohio, 1880, L.
Miller, Lola M., Colo., 1898, A.
Miller, Lucia M., Minn., 1894, A.
Miller, O. L., Ill., 1896, A.
Miller, R. E., Tex., 1898, A.
Milligan, Sarah J., Mo., 1897, A.
Millis, William A., Ind., 1896, A.
Mills, Leida H., Kan., 1895, A.
Mills, T. B., Wis., 1897, A.
Millspaugh, J. F., Utah, 1895, A.
Milne, James M., N. Y., 1890, A.
Milne, John M., N. Y., 1891, A.
Milne, William J., N. Y., 1892, A.
Miner, J. Perry, Neb., 1896, A.
Mitchell, Mary E., Ark., 1898, A.
Mitchell, M. S., Kan., 1895, A.
Mitchell, W. R., Ill., 1897, A.
Moldstad, John A., Tex., 1897, A.
Monlux, J. B., Cal., 1895, A.
Monroe, E. S. Ind., 1897, A.
Monroe, Will. S., Mass., 1893, A.
Monsarrat, Mrs. Laura L., Ky., 1877, L.
Monteser, Frederick, N. Y., 1894, A.

Montfort, R. V. K., N. Y., 1892, A.
Montgomery, Dora, Ill., 1897, A.
Montgomery, H. C., Ind., 1897, A.
Montgomery, W. S., D. C., 1898, A.
Montrose, Otis, N. Y., 1896, A.
Moon, A. W., N. J., 1889, A.
Moon, Kate E., Ala., 1895, A.
Moon, Schuyler B., Md., 1898, A.
Moore, A. C., Ill., 1897, A.
Moore, B. F., Ind., 1896, A.
Moore, Dora M., Colo., 1895, A.
Moores, Carrie E., Ohio, 1895, A.
Morgan, R. T., Ill., 1897, A.
Morgan, W. H., Ohio, 1895, A.
Morris, Harriet N., Ill., 1882, L.
Morris, John, Ky., 1896, A,
Morris, R. Anna, Ohio, 1891, A.
Morrison, Andrew J., Pa., 1881, A.
Morrison, Rose, Ohio, 1897, A.
Morse, Frank L., Ill., 1897, A.
Morss, Charles H., Mass., 1895, A.
Mott, T. A., Ind., 1896, A.
Mowry, William A., Mass., 1886, L.
Mulford, A. Isabel, Mo., 1896, A.
Mumford, Mrs. M. E., Pa., 1895, A.
Munro, Alexander A., N. Y., 1891, A.
Munroe, James Phinney, Mass., 1895, A.
Murdaugh, E. D., Okla., 1898, A.
Murdock, F. F., Mass., 1898, A.
Murlin, L. H., Kan., 1895, A.
Murphy, Eugene, Pa., 1898, A.
Murphy, George T., Mo., 1891, A.
Murphy, Maggie, Ark., 1898, A.
Murray, William S., Pa., 1898, A.
Murrey, T. P., Ark., 1898, A.
Myers, Will A., Ind., 1897, A.
Nagel, J. J., Iowa, 1895, A.
Nageler, J. G., Wis., 1897, A.
Needham, O., Wis., 1897, A.
Neet, Mrs. Mary V., Mo., 1894, A.
Nelson, E. B., N. Y., 1898, A.
Nelson, Kate S., Wis., 1896, A.
Newell, A. C., Iowa, 1896, A.
Newell, Miss C. S., Kan., 1895, A.
Newson, H. D., N. Y., 1895, A.
Nichols, Fred R., Ill., 1893, A.
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Nielsen, Carl H., Cal., 1898, A.
Nightingale, A. F., Ill., 1886, A.
Noel, Alex H., Mo., 1897, A.
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Norton, A. W., Neb., 1893, A.
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Norville, Josephine, Mo., 1895, A.
Noss, Theodore B., Pa., 1896, A.
Noyes, Milton, N. Y., 1898, A.
Nunn, Janet H., Minn., 1896, A.
Nussbaum, Sophie F. E., D. C., 1898, A.
Nye, Charles H., Wis., 1884, L.
Nykirk, John B., Mich., 1892, A.
O'Brien, Mrs. Agnes, N. Y., 1894, A.
O'Callaghan, W. F., N. Y., 1894, A.
O'Connor, D. C., Neb., 1894, A.
Ogg, R. A., Ind., 1897, A.
O'Hanlan, R. J., Wis., 1897, A.
O'Keefe, Mrs. S. J., Ill., 1896, A.
Olds, Mary L., Minn., 1894, A.
Oldt, F. T., Iowa, 1896, A.
O'Leary, Kate S., Ill., 1895, A.
Olin, Arvin S., Kan., 1890, A.
Oliver, Fanny E., Ill., 1897, A.
Olmstead, Emma G., Conn., 1896, A.
O'Neill, A. A., D. C., 1898, A.
Ormsby, F. B., Ill., 1896, A.
Orr, J. D., Kan., 1891, A.
Osborne, A. E., Cal., 1898, A.
*Osborne, George L., Mo., 1889, A.
Osenbaugh, C. M., Colo., 1895, A.
Osgood, Anna M., Ohio, 1890, A.
O'Shea, M. V., Wis., 1892, A.
Ostrander, Frank, Wis., 1897, A.
Owen, E. H., Ill., 1897, A.
Owen, Ermine, Mo., 1897, A.
Owen, H. A., Ill., 1897, A.
Owen, Lincoln, Mass., 1896, A
Owen, W. B., Ill., 1896, A.

Packard, S. S., N. Y., 1892, A.
Packer, Ella L., Iowa, 1895, A.
Page, R. S., Ill., 1896, A.
Palmer, A. N., Iowa, 1896, A.
Palmer, Charles S., Colo., 1895, A.
Palmer, E. D., Mich., 1894, A.
Palmer, Francis B., N. Y., 1890, A.
Parker, Alice N., D. C., 1898, A.
Parker, Charles I., Ill., 1887, D.
Parker, Charles V., Colo., 1887, A.
Parker, C. M., Ill., 1895, A.
Parker, Francis W., Ill., 1880, A.
Parker, Henry M., Ohio, 1895, A.
Parker, J. W., Ark., 1897, A.
Parker, W. D., Wis., 1884, L.
Parker, W. S., Mass., 1896, A.
Parkinson, D. B., Ill., 1897, A.
Parkinson, John B., Wis., 1884, L.
Parmenter, Charles W., Mass., 1895, A.
Parr, S. S., Minn., 1895, A.
Parrish, Celestia S., Va., 1897, A.
Parrish, Ophelia A., Mo., 1896, A.
Parsons, H. S., Tex., 1895, A.
Passmore, John A. M., Pa., 1892, A.
Patten, Frank C., Mont., 1897, A.
Pattengill, Henry R., Mich., 1892, A.
Patterson, B. F., Pa., 1895, A.
Patton, Cassia, Alaska, 1895, A.
Patton, Charles L., N. Y., 1886, A.
Paxson, Everett E., Mont., 1889, A.
Payne, Bertha, Ill., 1896, A.
Payne, W. C., Ill., 1896, A.
Payne, William H., Tenn., 1892, A.
Payne, William R., Tenn., 1898, A.
Peacher, A. L., Ark., 1896, A.
Peairs, H. B., Kan., 1897, A.
Peak, Charles N., Ind., 1896, A.
Pearse, C. G., Neb., 1891, A.
Pease, Alvin F., Mass., 1891, A.
Pease, N. W., N. J., 1894, A.
Peaslee, John B., Ohio, 1880, L.
Peck, A. L., N. Y., 1897, A.
Pendergast, W. W., Minn., 1894, A.
Pennell, Calvin S., Minn., 1864, L.
Perkins Institution, Mass., 1897, A.
Perrine, Lura L., N. D., 1895, A.
Perry, Elizabeth H., Mass., 1891, A.
Perry, George P., Wis., 1894, A.
Perry, William H., Ky., 1898, A.
Pershing, Thed., Pa., 1895, A.
Peterson, J. P., Wis., 1897, A.
Pfeiffer, J. W., Ohio, 1895, A.
Phelan, W. W., D. C., 1898, A.
Phelps, William F., Minn., 1870, D.
Philbrook, C. F., Ill., 1895, A.
Philips, George M., Pa., 1879, A.
Phillips, Hattie A., Iowa, 1886, A.
Phillips, J. H., Ala., 1888, A.
Pickard, Josiah L., Iowa, 1886, D.
Pierce, Edward T., Cal., 1887, A.
Pierce, Mrs. Ella M., R. I., 1896, A.
Pierce, Lovich, D. C., 1898, A.
Pierce, Mary R., Ill., 1897, A.
Pike, Joshua, Ill., 1891, D.
Piper, Jonathan, Wis., 1895, A.
Place, Mrs. C. L., Cal., 1896, A.
Plapp, F. W., Ill., 1897, A.
Plimpton, George A., N.Y., 1894, A.
Plumer, George M., Ohio, 1896, A.
Poland, A. B., N. J., 1892, A.
Pollock, Jessie, Ark., 1898, A.
Pollock, Rosalie, N. D, 1897, A.
Pollock, Susan P., D. C., 1892, A.
Posse, Baroness Rose, Mass., 1895, A.
Powell, W. B., D. C., 1892, A.
Powell, W. F., D. C., 1889, A.
Power, Gussie, N. Y., 1887, A.
Powers, James K., Ala., 1895, A.
Pratt, R. H., Pa., 1898, A.
Pray, Mabel L., Ohio, 1897, A.
Pray, T. B., Wis., 1894, A.
Preece, Mrs. Louise, Minn., 1894, A.
Prentiss, H. W., Mo., 1897, A.
Pressler, V. S., N. Y., 1898, A.
Preston, J. R., Miss., 1890, A.
Prettyman, E. B., Md., 1892, A.
Prichard, E. H., Ohio, 1895, A.
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Prince, John T., Mass., 1891, A.
Pringle, William J., Ill., 1896, A.
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Purer, Mary I., Ill., 1896, A.
Putnam, Mrs. Alice H., Ill., 1893, A.
Raab, Henry, Ill., 1884, L.
Race, S. J., Minn., 1895, A.
Ralston, James M., N. J., 1892, A.
Ramsay, Charles C., Mass., 1893, A.
Ramsey, George J., La., 1889, A.
Randall, J. E., Ohio, 1898, A.
Rankin, A. W., Minn., 1893, A.
Rapp, Eli M., Pa., 1898, A.
Raschig, H. H., Ohio, 1893, A.
*Rassweiler, J. K., Ill., 1897, A.
Raub, A. N., Del., 1892, A.
Rayman, R. E., Ohio, 1895, A.
Raymond, Andrew V. V., N. Y., 1895. A.
Read, J. I., Neb., 1898, A.
Redfield, Jennie L., Neb., 1895, A.
Reed, A. A., Neb., 1895, A.
Reel, Estelle, Wyo., 1894, A.
Reeves, C. E., Wash., 1896, A.
Reid, James, Mont., 1895, A.
Reiley, Cynthia E., Mont., 1895, A.
Reinhart, J. Albert, N. J., 1894, A.
Remington, Lew. D., Mich., 1896, A.
Rennick, Louise D., Ill., 1897, A.
Rennie, Robert H., Ill., 1897, A.
Ressler, Edwin D., Ore., 1892, A.
Reveley, Ellen G., Ohio, 1891, A.
Reynolds, Charles B., Mo., 1895, A.
Reynolds, J. H., Ark., 1897, A.
Rhoads, McHenry, Ky., 1891, A.
Rice, Emily A., N. J., 1892, A.
Rice, Gratia L., N. Y., 1889, A.
Rice, J. M., N. Y., 1895, A.
Richards, C. N., N. Y., 1898, A.
Richards, E. E., Ohio, 1894, A.
Richards, Mrs. E. H., Mass., 1898, A.
Richards, Zalmon, D. C., 1857, D.
Richeson, J., Ill., 1897, A.
Richmond, Sarah E., Md., 1876, L.
Rickoff, Andrew J., Cal., 1881, D.
Riddle, W., Pa., 1896, A.
Rider, Andrew J., N. J., 1897, A.
Ridge, J. C., Ohio, 1897, A.
Ridgeway, William C., Mo., 1898, A.
Rightsell, J. R., Ark., 1898, A.
Rigler, Frank, Ore., 1898, A.
Riley Co. Ed. Assoc., Kan., 1886, L.
Riley, Mrs. Matilda E., Mo., 1890, A.
Riste, W. G., Kan., 1897, A.
Rivers, W. W., Ark., 1895, A.
Robbins, C. W., Mo., 1892, A.
Robbins, George A., Ill., 1897, A.
Robert, James A., Ohio, 1882, L.
Roberts, Flora, Ind., 1896, A.
Roberts, Hester A., N. Y., 1894, A.
Roberts, H. L., Ill., 1897, A.
Roberts, L. D., Wis., 1897, A.
Robertson, J. L., Ill., 1897, A.
Robertson, Powhatan W., D. C., 1896, A.
Robinson, Albert R., Ill., 1895, A.
Robinson, Lucy, W. Va., 1896, A.
Robinson, Oscar D., N. Y., 1892, A.
Robinson, W. S., Ohio, 1895, A.
Rocheleau, W. F., Ill., 1896, A.
Rocholl, L. J., Minn., 1897, A.
Rogers, Dora B., N. C., 1896, A.
Rogers, J. N., Ga., 1897, A.
Rogers, Josephine E., N. Y., 1893, A.
Rogers, Lillian E., Mass., 1897, A.
Rogers, Rovillus R., N. Y., 1895, A.
*Rood, Wilbur V., Ohio, 1896, A.
Roof, F. M., Ala., 1892, A.
Roop, C. Y., Cal., 1886, L.
Root, J. A., Ill., 1897, A.
Rose, George E., Kan., 1886, L.
Rose, S. L., Ohio, 1896, A.
Roth, Anna C., Ky., 1897, A.
Rounds, Charles C., N. Y., 1876, L.
Rourke, Mary, Iowa, 1895, A.
Rowe, Alex M., Minn., 1894, A.
Rowe, H. M., Md., 1896, A.
Rowe, Mary E., Ind., 1895, A.
Rowe, Stuart H., Conn., 1898, A.
Rowe, W. S., Ind., 1895, A.
Rowland, J. H., Ohio, 1896, A.
Royal, M. G., Wash., 1896, A.
Rudolf, Ida, Ky., 1896, A.
Russell, James E., N. Y., 1895, A.
Russell, J. A., Mass., 1894, A.
Ryan, George G., N. J., 1894, A.
Ryon, C. M., N. Y., 1896, A.
Sabin, Albert R., Ill., 1884, A.
Sabin, Ellen C., Wis., 1895, A.
Sabin, Henry, Iowa, 1889, A.
Sage, A. H., Wis., 1898, A.
Sage, W. V., Mich., 1896, A.
Sale, A. R., Iowa, 1897, A.
Salisbury, Albert, Wis., 1887, A.
Samuel, William H., Pa., 1893, A.
Sanders, D. E., Mont., 1895, A.
Sanders, F. W., W. Va., 1897, A.
Sandison, Howard, Ind., 1896. A.
Sanford, F., Cal., 1897, A.
Sanford, Henry R., N. Y., 1895, A.
Sanor, S. D., Ohio, 1893, A.
Sargent, Dudley A., Mass., 1896, A.
Sargent, Elisa A., N. Y., 1896, A.
Saunders, Sara A., N. Y., 1896, A.
Savage, Reed, Ill., 1889, A.
Sawhill, Thomas A., Kan., 1886, L.
Sawvel, Franklin B., Pa., 1894, A.
Sawyer, C. L., Minn., 1897, A.
Saylor, J. F., Neb., 1896, A.
Scarlett, Augustus, N. J., 1891, A.
Schaeffer, Nathan C., Pa., 1887, A.
Schauffler, Alfred T., N. Y., 1895, A.
Schermerhorn, Jane A., N. Y., 1895, A.
Schiller, J. D., Mich., 1896, A.
Schmucker, S. C., Pa., 1892, A.
Schneider, Henry G., N. Y., 1895, A.
Schofield, Bertha, Minn., 1897, A.
Schofield, Martha, S. C., 1891, L.
Scholfield, Bessie M., R. I., 1896, A.
Schreiber, Mae E., Wis., 1896, A.
Schryver, Anna A., Mich., 1896, A.
Schurman, J. G., N. Y., 1896, A.
Schuyler, Aaron, Kan., 1886, L.
Schuyler, E. H., N. J., 1894, A.
Scobey, Frank H., N. J., 1894, A.
Scott, Charles B., N. Y., 1890, A.
Scott, E. H., Ill., 1895, A.
Scott, F. N., Mich., 1897, A.
Scott, Harriet M., Mich., 1896, A.
Scott, Izora, Colo., 1897, A.
Scott, James W., Ohio, 1893, A.
Scott, O. C., Ill., 1895, A.
Scott, W. H., Ohio, 1893, A.
Scovel, Sylvester, Ohio, 1897. A.
Scudder, Myron Tracy, Conn., 1895, A.
Scull, James F., Ind., 1895, A.
*Searing, Edward, Minn., 1895, A.
Searle, Miss S. M., N. J., 1893, A.
Seaver, Edwin P., Mass., 1893, A.
Seeley, Charles D., N. Y., 1896, A.
Seeley, Levi, N. J., 1890, A.
Seerley, H. H., Iowa, 1884, A.
Sellars, D. Francis, Ill., 1896, A.
Selleck, W. F. F., Minn., 1898, A.
Sewall, May W., Ind., 1897, A.
Sexton, E. K., N. J., 1897, A.
Shanahan, Rev. J. W., Pa., 1895, A.
Sharkey, J. P., Ohio, 1890, A.
Shaw, A. L., Mich., 1897, A.
Shaw, Edward R., N. Y., 1893, A.
Shaw, Samuel, Wis., 1884, L.
Shawan, J. A., Ohio, 1894, L.
Shear, S. R., N. Y., 1895, A.
Shearer, W. J., N. J., 1895, A.
Shearer, W. S., Iowa, 1897, A.
Sheats, W. N., Fla., 1893, A.
Sheber, Cora, Ark., 1898, A.
Sheldon, William E., Mass., 1857, D.
Shelley, W. H., Md., 1895, A.
Shepard, George C., Mich, 1897, A.
Shepard, Irwin, Minn., 1883, A.
Sherwood, Jennie M., Ark., 1898, A.
Shinn, Josiah H., Ark., 1890, A.
Shippen, Edward, Pa., 1879, L.

Shirk, David F., Kan., 1895, A.
Shives, Julia, Ark., 1898, A.
Shoemaker, W. A., Minn., 1895, A.
Shorney, George H., Ill., 1897, A.
Shrieves, Emma, Wis., 1896, A.
Shutts, George C., Wis., 1896, A.
Sibley, Charles A., Mass., 1895, A.
*Sickel, J. F. C., Pa., 1894, A.
Siefert, H. O. R., Wis., 1895, A.
Sigler, P. N., Ohio, 1898, A.
Silcox, Julia C., Ohio, 1897, A.
Silke, Lucy S., Ill., 1893, A.
Silver, Edgar O., Mass., 1894, A.
Simerwell, E. A., Kan., 1895, A.
Simonds, H. A., Wis., 1895, A.
Sims, J. F., Wis., 1897, A.
Sinclair, S. B., Can., 1891, A.
Singer, Edgar A., Pa., 1880, L.
Sisson, E. O., Ill., 1897, A.
Skidmore, Sydney T., Pa., 1895, A.
Skinner, Charles R., N. Y., 1890, D.
Skinner, William C., Ohio, 1895, A.
*Skinner, W. H., Neb., 1895, A.
Slack, H. W., Minn., 1897, A.
Slade, James P., Ill., 1895, A.
Slaton, W. F., Ga., 1897, A.
Slaton, W. M., Ga., 1894, A.
Slauson, H. M., Mich., 1894, A.
Sloane, Clyde, Ill., 1898, A.
Smallwood, Mabel E., Ill., 1896, A.
Smart, James H., Ind., 1877, D.
Smedley, Eva A., Ill., 1897, A.
Smiley, William H., Colo., 1892, A.
Smith, A. J., Minn., 1898, A.
Smith, Arthur P., Mass., 1890, A.
Smith, A. Thomas, Pa., 1893, A.
Smith, Anna T., D. C., 1895, A.
Smith, Carrie J., Wis., 1895, A.
Smith, Mrs. Clinton, D. C., 1898, A.
Smith, Edwin R., Wis., 1897, A.
Smith, E. E., Ill., 1896, A.
Smith, E. R., Ill., 1897, A.
Smith, Euler B., Ga., 1887, A.
Smith, F. P., Kan., 1897, A.
Smith, George M., S. D., 1895, A.
Smith, Harriet E., Wis., 1897, A.
Smith, H. J., N. Y., 1895, A.
Smith, J. F., Iowa, 1897, A.
Smith, J. F., Ohio, 1898, A.
Smith, J. Mace, N. Y., 1895, A.
Smith, J. N., Pa., 1896, A.
Smith, Sydney F., Colo., 1895, A.
Smith, William G., Minn,, 1895, A.
Smyth, W. S., Ill., 1895, A.
Snoboda, Dora, Ky., 1897, A.
Snow, Bonnie E., Minn., 1896, A.
Snow, Francis H., Kan., 1893, A.
Snow, Mary S., Me., 1898, A.
Snyder, A. J., Ill., 1897, A.
Snyder, E. R., Colo., 1895, A.
Snyder, Henry, N. J., 1894, A.
Snyder, Jessie M., Ga., 1897, A.
Snyder, J. H., Ohio, 1896, A.
Snyder, J. L., Mich., 1889, A.
Snyder, Lydia E., Ill., 1895, A.
Snyder, W. R., Ind., 1895. A.
Snyder, Z. X., Colo., 1887, A.
Snyder, Mrs. Z. X., Colo., 1896, A.
Soldan, F. Louis, Mo., 1877, D.
Sollitt, Alice E., Ill., 1893, A.
Somers, E. J., D. C., 1898, A.
Soulé, George, La., 1892, A.
Spangler, H. T., Pa., 1894, A.
Spaulding, F. E., N. J., 1896, A.
Spaulding, Randall, N. J., 1892, A.
Spayd, H. H., Pa., 1892, A.
Speer, W. W., Ill., 1896, A.
Spencer, Pauline W., Pa., 1893, A.
Spencer, Robert C., Wis., 1884, L.
Spencer, Mrs. Sara A., D. C., 1892, A.
Spero, Anna K., Cal., 1877, L.
Springer, Durand W., Mich., 1894, A.
Squire, Mary V., N. Y., 1896, A.
Stableton, J. K., Mass., 1892, A.
Stanford, Alma B., Minn., 1897, A.
Stanley, Edmund, Kan., 1886, L.
Staples, Helen F., Minn., 1896, A.
Stark, Joshua, Wis., 1884, L.

Starrett, Mrs. H. E., Ill., 1897, A.
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Steele, William L., Ill., 1890, A.
Steere, E. A., Mont., 1896, A.
Stehman, J. H., Ill., 1897, A.
Stephens, H. Morse, N. Y., 1896, A.
Stephenson, Lillie S., Ill., 1895, A.
Stern, Menco, N. Y., 1882, L.
Stetson, W. W., Maine, 1895, A.
Stevens, Moses C., Ind., 1876, L.
Stevens, Plowden, Jr., N. Y., 1895, A.
Stevenson, A. L., Ill., 1897, A.
Stevenson, William C., Kan., 1890, A.
Stewart, I. N., Wis., 1884, L.
Stewart, John A., Mich., 1884, A.
Stewart, Joseph S., Ga., 1895, A.
Stewart, N. Coe, Ohio, 1892, A.
Stewart, Sarah A., Pa., 1884, L.
Stickney, Lucia, Ohio, 1893, A.
Stitt, E. W., N. Y., 1896, A.
Stockleman, Mary E., Ohio, 1896, A.
Stockwell, Mrs. Helen H., N. D., 1894, A.
Stockwell, Thomas B., R. I., 1891, A.
Stockwell, Walter L., N. D., 1894, A.
Stokes, Horace A., Ohio, 1895, A.
Stone, Mason S., Vt., 1894, A.
Stoneroad, Rebecca D., D. C., 1896, A.
Storm, A. V., Iowa, 1894, A.
Stout, George H., Pa., 1884, A.
Stout, Isaac H., N. Y., 1890, A.
Stout, J. D., Iowa, 1898, A.
Stowell, Thomas B., N. Y., 1891, A.
Strachan, Alexander, S. D., 1897, A.
Stratford, W. R. J., Ind., 1895, A.
Stratton, C. C., Ore., 1888, D.
Stratton, Frederick E., Minn., 1886, A.
Strong, Edwin A., Mich., 1892, A.
Strong, James W., Minn., 1895, A.
Stubbs, J. E., Nev., 1895, A.
Study, J. N., Ind., 1897, A.
Stuver, E. Wyo., 1895, A.
Sudborough, Mrs. Grace B., Neb., 1880, L.
Sullivan, Christine, Ohio, 1886, A.
Summers, Alexander, D. C., 1898, A.
Super, Charles W., Ohio, 1891, A.
Suplee, Etta, Iowa, 1895, A.
Suplee, Fannie, Iowa, 1895, A.
Supts. and Princ. Assoc., Wis., 1884, L.
Suter, Anna, Ind., 1890, A.
Suter, Miss H. A., La., 1894, A.
Sutherland, Margaret W., Ohio, 1895, A.
Sutton, W. S., Tex., 1895, A.
Swain, Joseph, Ind., 1893, A.
Swan, Lizzie P., Wis., 1897, A.
Swart, Rose C., Wis., 1895, A.
Swiler, J. W., Wis., 1897, A.
Syphax, Carrie E., D. C., 1895, A.
Tadd, J. Liberty, Pa., 1892, A.
Talbot, Henry, N. Y., 1892, A.
Tanner, J. M., Utah, 1897, A.
Tapley, William W., Mass., 1892, A.
Tarbell, Horace S., R. I., 1891, A.
Taubman, Kate, S. D., 1894, A.
Tawney, Guy A., Wis., 1898. A.
Taylor, A. R., Kan., 1886, D.
Taylor, Cordie, Mo., 1895, A.

Taylor, Edward, Ky., 1896, A.
Taylor, Henry J., Iowa, 1884, L.
Taylor, J. F., Neb., 1896, A.
Taylor, Joseph S., N. Y., 1894, A.
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Teachers' Association, Wis., 1884, L.
Teachers' Institute. Philadelphia, Pa., 1879, D.
Teague, Leamy, Ark., 1898, A.
Templeton, J. C., Cal., 1894, A.
Terrel, Harriet E., Ohio, 1896, A.
Terrell, Mary C., D. C., 1898, A.
Terry, Miss J. L., Wis., 1897, A.
Thames, W. I., Miss, 1897, A.
Tharpe, F. D., Mo., 1891, A.
Thatcher, J. L., Wis., 1896, A.
Thayer, Ada F., N. Y., 1896, A.
Theilman, Louis, Mo., 1895, A.
Thiry, J. H., N. Y., 1897, A.
Thomas, D. W., Ind., 1896, A.
Thomas, Mrs. Emma A., Mich., 1896, A.
Thomas, Miss M. J. B., N. J., 1896, A.
Thomas, R. S., Ohio, 1896, A.
Thompson, D. M., N. C., 1898, A.
Thompson, E. C., Mich., 1894, A.
Thompson, H. E., Okla., 1895, A.
Thompson, John G., Mass., 1895, A.
Thompson, Langdon S., N. J., 1876, L.
Thompson, O. D., Mich., 1896, A.
Thompson, T. E., Mass., 1897, A.
Thompson, William O., Ohio, 1894, A.
Thomson, Frank D., Ill., 1895, A.
Thudium, C. C., Mo., 1898, A.
Thurber, Charles H., Ill., 1893, A.
Thwing, Charles F., Ohio, 1895, A.
Tibbets, Anna, Neb., 1894, A.
Tibbetts, A. C., Minn., 1895, A.
Tiffany, A. J., Ill., 1897, A.
Tillotson, D. C., Kan., 1886, L.
Tinker, B. W., Conn., 1897, A.
Titus, Cynthia, Iowa, 1897, A.
Todd, Emma J., Ill., 1897, A.
Todd, Samuel B., Wis., 1895, A.
Tolman, Henry L., Ill., 1897, A.
Tompkins, A., Ill., 1896, A.
Tompkins, Lillian M., Minn., 1898, A.
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CLASSIFIED MEMBERSHIP BY STATES

IN THE

NATIONAL EDUCATIONAL ASSOCIATION

FOR THE YEAR 1898—(WASHINGTON MEETING)

State or Territory	Active Membership				Associate Membership	Total Membership
	Life Directors	Life Members	Active Members	Total Active Membership		
Total,	38	135	1,779	1,952	8,581	10,654
North Atlantic Division,	9	23	489	521	971	1,492
South Atlantic Division,	4	9	126	139	1,007	1,146
South Central Division,	3	2	138	143	1,445	1,589
North Central Division,	18	90	888	996	4,886	5,882
Western Division,	4	11	133	148	264	412
Foreign,	..	..	5	5	8	13
Unclassified,	..	..	..	..	..	120
North Atlantic Division—						
Maine,	..	..	7	7	3	10
New Hampshire,	..	..	..	..	6	6
Vermont,	..	1	2	3	8	11
Massachusetts,	2	3	93	98	61	159
Rhode Island,	1	..	14	15	21	36
Connecticut,	..	1	16	17	14	31
New York,	5	10	208	223	286	509
New Jersey,	..	1	72	73	99	172
Pennsylvania,	1	7	77	85	473	558
South Atlantic Division—						
Delaware,	..	..	3	3	6	9
Maryland,	..	1	19	20	60	80
District of Columbia,	3	3	44	50	332	382
Virginia,	..	..	8	8	55	63
West Virginia,	1	1	11	13	116	129
North Carolina,	..	2	8	10	66	76
South Carolina,	..	1	6	7	85	92
Georgia,	..	1	23	24	237	261
Florida,	..	..	4	4	50	54
South Central Division—						
Kentucky,	1	2	28	31	377	408
Tennessee,	2	..	11	13	235	248
Alabama,	..	..	17	17	212	229
Mississippi,	..	..	9	9	91	100
Louisiana,	..	..	11	11	135	146
Texas,	..	..	19	19	238	257
Arkansas,	..	..	37	37	95	132
Oklahoma,	..	..	5	5	55	60
Indian Territory,	..	..	1	1	7	8
North Central Division—						
Ohio,	3	15	132	150	1,163	1,313
Indiana,	1	3	69	73	518	591
Illinois,	6	8	233	247	1,093	1,340
Michigan,	2	..	63	65	314	379
Wisconsin,	..	34	102	136	225	361
Iowa,	1	2	61	64	319	383
Minnesota,	1	2	75	78	86	164
Missouri,	2	3	59	64	731	795
North Dakota,	..	..	13	13	13	26
South Dakota,	..	..	9	9	36	45
Nebraska,	..	4	39	43	60	103
Kansas,	2	19	34	55	327	382
Western Division—						
Montana,	..	1	13	14	6	20
Wyoming,	..	..	5	5	3	8
Colorado,	1	1	43	45	151	196
New Mexico,	..	..	6	6	21	27
Arizona,	..	..	5	5	16	21
Utah,	..	..	7	7	18	25
Nevada,	..	..	2	2	..	2
Idaho,	..	..	3	3	..	3
Washington,	..	1	8	9	3	12
Oregon,	1	1	5	7	3	10
California,	2	7	35	44	43	87
Alaska,	..	..	1	1	..	1
Canada,	..	..	3	3	6	9
Hungary,	..	..	1	1	..	1
Mexico,	..	..	1	1	1	2
Argentine,	..	..	..	..	1	1

RECORD OF MEMBERSHIP BY STATES

IN THE

NATIONAL EDUCATIONAL ASSOCIATION

FOR EACH YEAR FROM 1884–98, INCLUSIVE,

Excepting for 1893, when no regular meeting was held. Heavier numbers show membership from the state in which the meeting for the year was held. *

State or Territory	Madison	Saratoga	Topeka	Chicago	San Francisco	Nashville	St. Paul	Toronto	Saratoga	Asbury Park	Denver	Buffalo	Milwaukee	Washington	Total	Average Membership
	1884	1885	1886	1887	1888	1889	1890	1891	1892	1894	1895	1896	1897	1898		
Total, . . .	2,729	625	1,197	9,115	7,216	1,984	5,474	4,778	3,360	5,915	11,297	9,072	7,111	10,653	80.526	5,752
North Atlantic Div.,	792	406	386	773	803	101	795	426	1.187	1,711	1,462	2,940	942	1,492	14,216	1,015
South Atlantic Div.,	77	16	31	44	113	128	95	151	309	271	289	237	172	1,146	3,079	219
South Central Div.,	111	19	47	370	216	1,074	261	417	253	460	899	419	304	1,588	6,038	459
North Central Div.,	1,712	176	708	7,671	1,074	642	4,156	2,933	1,456	3,357	7,211	5.083	5,315	5,882	47,378	3,384
Western Div., . .	26	7	25	102	4,974	38	122	196	104	73	1,403	377	366	412	8,225	588
Foreign, ...	11	1	..	155	36	1	45	655	51	43	33	16	12	13	1,072	76
Unclassified, . .	..	..	..	..	..	..	..	..	..	..	..	..	..	120	120	..
North Atlantic Div.—																
Maine, . . .	21	2	5	25	11	..	32	30	10	5	24	7	7	10	189	13
New Hampshire,	64	6	10	23	11	..	32	9	5	7	27	8	6	6	214	15
Vermont, . . .	43	8	3	41	4	..	40	4	20	4	13	14	15	11	220	16
Massachusetts, .	310	145	85	277	206	28	290	114	212	52	191	197	159	159	2,425	173
Rhode Island, .	50	13	13	29	30	4	31	42	23	12	55	35	23	36	386	27
Connecticut, . .	40	18	23	36	48	4	31	18	63	13	26	43	24	31	408	29
New York, . .	143	**159**	91	211	210	29	228	117	**611**	326	521	**2,132**	411	509	5,701	407
New Jersey, . .	40	27	35	23	41	13	12	16	65	**969**	168	179	110	172	1,698	134
Pennsylvania, .	81	28	121	108	242	23	99	76	178	323	437	325	187	558	2,786	199
South Atlantic Div.—																
Delaware, . .	1	..	4	..	3	1	2	5	6	8	17	11	8	9	75	5
Maryland, . .	5	..	10	8	17	3	7	13	49	45	53	23	31	80	345	25
District of Col.,	30	1	7	12	32	13	21	10	35	24	47	29	57	**382**	703	50
Virginia, . . .	6	4	3	2	18	12	2	8	2	24	36	21	10	63	210	15
West Virginia, .	15	3	3	8	6	6	27	49	20	37	49	52	16	129	419	30
North Carolina,	3	2	..	2	8	12	2	13	17	15	5	14	4	76	175	13
South Carolina,	5	4	1	2	13	22	4	18	14	52	1	31	7	92	263	19
Georgia, . . .	11	1	2	10	16	43	23	31	163	64	62	43	30	261	760	54
Florida, . . .	1	1	1	..	..	16	7	4	3	2	19	13	9	54	129	9
South Central Div.—																
Kentucky, . .	33	2	8	151	22	114	39	57	42	128	176	77	98	408	1,355	98
Tennessee, . .	12	6	5	62	83	**607**	97	124	57	124	66	57	25	248	1,573	112
Alabama, . . .	9	1	1	16	45	123	35	79	51	41	41	59	25	229	755	54
Mississippi, . .	7	1	2	7	10	87	44	42	36	20	49	25	19	100	449	32
Louisiana. . .	3	7	8	11	7	19	13	25	21	35	108	25	42	146	470	34
Texas, . . .	22	1	15	55	29	89	20	53	9	82	294	99	41	257	1,066	76
Arkansas, . .	22	..	8	67	12	29	12	34	33	25	84	63	41	132	559	40
Oklahoma, . .	..	..	..	..	..	..	..	..	..	4	58	14	11	60	147	25
Indian Territory,	3	1	..	1	8	6	1	3	4	1	23	...	2	7	60	4
North Central Div.—																
Ohio, ...	121	43	67	581	225	60	361	355	178	990	592	565	357	1,313	5,808	415
Indiana, . . .	54	15	46	418	71	89	206	149	65	258	321	250	205	591	2,738	196
Illinois, . . .	354	33	164	**1,750**	222	204	625	666	214	871	1,495	1,174	785	1,340	9,895	707
Michigan, . .	77	12	20	273	40	29	137	259	285	155	204	589	327	379	2,786	198
Wisconsin, . .	**546**	18	18	486	57	28	443	222	72	143	188	413	**1,870**	361	4.864	347
Iowa, ...	304	18	87	1,146	96	67	572	278	110	164	1,086	578	543	383	5,432	387
Minnesota, . .	132	9	11	649	58	16	**933**	118	54	86	193	303	333	164	3,059	219
Missouri, . . .	46	11	73	625	133	68	249	320	189	435	1,113	406	285	795	4,748	339
North Dakota, .	23	1	5	149	8	7	99	32	16	8	28	34	53	26	982	70
South Dakota, .							109	31	20	9	78	83	118	45		
Nebraska . . .	39	5	27	634	40	10	147	220	126	127	742	363	251	103	2,834	202
Kansas, . , .	16	11	**190**	960	124	64	275	283	127	111	1,171	325	187	382	4,226	302
Western Div.—																
Montana, . . .	3	1	1	9	4	5	37	24	9	3	15	43	78	20	252	18
Wyoming, . .	1	2	2	8	8	..	5	13	4	2	48	7	10	8	120	9
Colorado, . .	12	2	11	40	109	8	56	114	59	58	**1,136**	177	145	196	2,123	152
New Mexico, .	..	..	..	2	26	2	1	7	5	..	26	16	21	27	133	13
Arizona, . . .	..	..	..	1	45	1	1	..	2	2	11	6	6	21	96	10
Utah, ...	..	1	3	4	127	..	..	10	8	4	89	37	22	25	330	28
Nevada, . . .	1	..	1	6	134	..	1	..	..	..	2	5	3	2	155	10
Idaho, ...	..	..	1	..	12	..	..	..	1	1	3	10	6	3	37	3
Washington, . .	1	..	1	3	27	1	6	18	1	2	6	16	8	12	102	7
Oregon, . . .	3	1	1	11	204	8	7	5	5	..	14	9	7	10	285	20
California, . .	5	..	4	18	**4,278**	13	8	5	10	1	53	51	56	87	4,589	328
Alaska, . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
Miscellaneous, . .	11	..	..	143	16	..	..	5	3	2	1	2	5	4	192	14
Canada, ...	..	1	..	12	20	1	45	**650**	48	41	32	14	8	9	891	64

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Winona, Minn.

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